

TRANSCRIPT

FEDERAL OPEN MARKET COMMITTEE MEETING

February 2-3, 1981

Prefatory Note

This transcript has been produced from the original raw transcript in the FOMC Secretariat's files. The Secretariat has lightly edited the original to facilitate the reader's understanding. Where one or more words were missed or garbled in the transcription, the notation "unintelligible" has been inserted. In some instances, words have been added in brackets to complete a speaker's thought or to correct an obvious transcription error or misstatement.

Errors undoubtedly remain. The raw transcript was not fully edited for accuracy at the time it was produced because it was intended only as an aid to the Secretariat in preparing the record of the Committee's policy actions. The edited transcript has not been reviewed by present or past members of the Committee.

Aside from the editing to facilitate the reader's understanding, the only deletions involve a very small amount of confidential information regarding foreign central banks, businesses, and persons that are identified or identifiable. Deleted passages are indicated by gaps in the text. All information deleted in this manner is exempt from disclosure under applicable provisions of the Freedom of Information Act.

Staff Statements Appended to the Transcript

Mr. Kichline, Economist
Mr. Zeisel, Associate Economist
Mr. Truman, Associate Economist
Mr. Pardee, Manager for Foreign Operations
Mr. Sternlight, Manager for Domestic Operations
Mr. Axilrod, Secretary and Staff Adviser

Meeting of the Federal Open Market Committee

February 2-3, 1981

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D. C., starting on Monday, February 2, 1981, at 10:00 a.m. and continuing on Tuesday, February 3, 1981, at 9:30 a.m.

PRESENT: Mr. Volcker, Chairman
Mr. Solomon, Vice Chairman
Mr. Gramley
Mr. Guffey
Mr. Morris
Mr. Partee
Mr. Rice
Mr. Roos
Mr. Schultz
Mrs. Teeters
Mr. Wallich
Mr. Winn

Messrs. Balles, Boehne, Boykin, Mayo, and Timlen, Alternate Members of the Federal Open Market Committee

Messrs. Black, Corrigan, and Ford, Presidents of the Federal Reserve Banks of Richmond, Minneapolis, and Atlanta, respectively

Mr. Altmann, Secretary
Mr. Bernard, Assistant Secretary
Mr. Petersen, General Counsel
Mr. Oltman, Deputy General Counsel
Mr. Mannion 1/, Assistant General Counsel
Mr. Axilrod, Economist

Messrs. Balbach, J. Davis, R. Davis 2/, T. Davis, Eisenmenger, Ettin, Henry, Keir, Kichline, Truman, and Zeisel, Associate Economists

Mr. Pardee, Manager for Foreign Operations, System Open Market Account

1/ Attended Tuesday session only.

2/ Attended Monday session only.

Mr. Sternlight, Manager for Domestic Operations, System
Open Market Account

Mr. Allison 3/, Secretary, Office of the Secretary,
Board of Governors

Mr. Coyne, Assistant to the Board of Governors

Mr. Prell, Associate Director, Division of Research and
Statistics, Board of Governors

Mr. Siegman, Associate Director, Division of International
Finance, Board of Governors

Mr. Enzler 3/, Senior Deputy Associate Director, Division
of Research and Statistics, Board of Governors

Mr. Lindsey 3/, Assistant Director, Division of Research
and Statistics, Board of Governors

Messrs. Beck and Simpson 3/, Senior Economists, Banking
Section, Division of Research and Statistics,
Board of Governors

Mr. Johnson 3/, Economist, Government Finance Section,
Division of Research and Statistics, Board of Governors

Mrs. Steele, Economist, Open Market Secretariat, Board
of Governors

Messrs. Burns, Danforth, Fousek, Keran, Koch, and Scheld,
Senior Vice Presidents, Federal Reserve Banks of
Dallas, Minneapolis, New York, San Francisco,
Atlanta, and Chicago, respectively

Messrs. Broadus, Mullineaux, Mrs. Nichols, and Mr. Siren,
Vice Presidents, Federal Reserve Banks of Richmond,
Philadelphia, Chicago, and Boston, respectively

Mr. Meek, Monetary Adviser, Federal Reserve Bank of New
York

Transcript of Federal Open Market Committee Meeting of
February 2-3, 1981

Session held on February 2, 1981

CHAIRMAN VOLCKER. I think we better get started. In general outline, I assume we probably will end up spending all morning, at least, on the so-called technical study. We'll see whether we complete it this morning. I assume sometime today we will get to the economic outlook over whatever your forecast horizon is. Assuming we get that far--and I would think we would get that far--we will have at least a preliminary discussion of the longer-range targets; I doubt that we will get to the shorter-range targets today. And I think we can defer all the managerial reports and that kind of thing until tomorrow. So, we will start. We have to approve the minutes. Do I have a motion?

SPEAKER(?). So moved.

SPEAKER(?). Second.

CHAIRMAN VOLCKER. Without objection, we will approve the minutes. Do we have anything else we're supposed to do here at the beginning? Well, we'll just go to the [new] monetary control procedure. Presumably, the objective of this discussion is to arrive at some judgment as to whether or not we're generally satisfied with the technique that we adopted [in October 1979]--a technique which, in the short run, emphasizes control of nonborrowed reserves. And we alter that in the light of what is going on in the money supply or total reserves. It implies judgmental adjustments in terms of the multiplier; it implies some kind of federal funds rate band. My own interpretation of that federal funds band may differ from that of others, but I don't think it has been, in and of itself, much of a constraint because every time we [reached the limit] we moved it. On the other hand, there is some sense inherent in the technique, but maybe not openly stated, that the way the technique is run doesn't bounce reserves up and down very sharply depending upon what happened last week or even last month. There is some sluggishness in adjustments which in itself presumably has a short-run stabilizing effect on money market interest rates even though that is not the stated objective. But it is inherent in the way the technique has been operated.

So, we have to decide whether to continue with that general technique. And if we don't want to continue with it, somebody has to put forward an alternative that is desirable in a rather important way, which I suppose could go the gamut of more emphasis on interest rates to more emphasis on some stricter or more mechanical reserve technique. Assuming we want to continue generally with the present technique, there are a number of questions that arise as to what modifications might be made as a matter of emphasis, [such as] speed of the reactions on nonborrowed reserves and some important questions --which we probably could never resolve today in any event--on the discount window and discount rate management and the management of the federal funds rate band. I hope we can come out with some coherent or incoherent--preferably coherent--conclusion on these subjects.

Let me say something as far as the conclusions of the study in a more technical area are concerned. I believe that in any statement I make to the Congress I am going to have to review this study and pronounce some general conclusions. The most important conclusion will be whether we want to change the technique, the question I just raised. But on a somewhat more technical level, my understanding, subject to confirmation or change during our discussion this morning--and I may not be comprehensive in this listing--is that there is no real evidence that on a weekly or monthly basis the money supply has moved more erratically this year than before. I think what the study shows is that it looks that way if you look at the raw figures; but by the time we get finished seasonally adjusting and revising seasonal adjustments as we did in earlier years, it's likely to look in a very short-run perspective about as stable or as unstable as it did before. In fact, there is a very large random component in the weekly figures and a considerable one in the monthly figures. So, I take it the study suggested that it was somewhat of an open question as to whether we had a more erratic performance in the money supply this year than in earlier years. If you look at it in a little longer perspective, say, quarterly, then statistically we did [have more variation]; but whether that was a reflection of external events like credit controls and the sharp fluctuations in the economy or whether it had anything to do with the technique is the open question. As the study put it, it's certainly not proven that the technique had anything to do with it.

I think all the studies suggest that there is a definite tradeoff between interest rates and money supply stability. And the tradeoff assumes rather violent proportions in terms of interest rates, if we really want to stabilize the money supply. The studies also suggest that the whole structure of interest rates has been affected by fluctuations in short-term rates much more than earlier, depending upon how you look at the studies. So, when we're talking about fluctuations in short-term rates, at least in the last year, we're talking about fluctuations in the whole structure of interest rates. We have not found much evidence of an induced cycle in the money supply when the procedures [led us to] tighten to force a decline [in the money supply] and then to ease off to force another increase. That's an important question. My judgment of what is said is that there's not much evidence for that. And there isn't much evidence that short-run--by that I mean quarterly or more than quarterly--deviations in the money supply have any very pronounced effect on the economy or on inflation because they are not terribly important in that sense. Well, those are some of the tentative conclusions I have drawn from what I have read of these studies, but they are all subject to further interpretation as we proceed.

With that much introduction, I will have Mr. Axilrod introduce the discussion more technically after welcoming Mr. Boehne and Mr. Boykin to our council this morning. If you can survive this meeting, I suspect you will be able to survive any of the future meetings! Mr. Axilrod.

MR. AXILROD. Thank you, Mr. Chairman. Some of my introductory comments will repeat some of yours, but I don't think any of them will contradict.

MR. SCHULTZ. We'll watch carefully. It may come as a surprise.

MR. AXILROD. I'd like to organize my introductory comments around three general points. One is the limitations in the study; second is a very brief summary of the findings, since they have been summarized over the course of 15 pages in a memo; and third is a general statement about what I, at least, would see as some of the implications of the study for our present procedure.

First, on the limitations: It seems like a long period since the introduction of the [new] procedure in October [1979], but the period is now 15 months; and it's really very short for evaluating the procedure. And it's particularly short because last year was a very strange year in that there were a lot of what we call exogenous factors affecting the economy that would have had impacts on the money supply and interest rates no matter what procedure the Federal Reserve was following. That makes the problem of averaging out, so to speak, even more complicated because we had a year where interest rates, money supply, and spending were subject to exogenous shocks that make trying to find out what the procedure did to the economy or to the money supply or to interest rates very difficult. It's very hard to separate it out. So, given the nature of the period, the 12 months that we actually used in [our studies to evaluate] the 15 months or longer that we now actually have [used the new control procedure] is quite short.

Secondly, of course, we couldn't just observe the procedure and say: "Well, there was a lot of money and interest rate variability." We were forced to try to see if we could conclude that either the procedure gave rise to the variability or the variability was caused exogenously and was independent of the procedure. We needed something to judge all that against, so we had to use models, which are nothing more or less than an average of 10 or 15 years of experience, and see how they would have worked if 1980 in some sense had had the characteristics of those 10 or 15 years over which the models were constructed. Thus, I would really want to caution you about that. I think that was a necessary procedure, but I want to caution you because: (a) 1980 wasn't like the previous 10 or 15 years; (b) models do tend to be misspecified and they may not even be a correct representation of the previous 10 or 15 years; and (c) models have a disconcerting tendency to give very different results if you put in one variable and take out another or if you change the period over which the variables are estimated. As a result of that we did try to use a number of different models, which had a number of different views of the world, in order to try to give as fair a test as possible. But I would use all these results with caution. Because one model works in one period surely doesn't mean it's going to work in the next.

Finally, I would say on behalf of the whole staff that we have had a limited time to evaluate so complicated a subject. We started thinking about this sometime in September; I remember discussing it with the Chairman. I think we started working in earnest on it sometime in October, and that really is a limited time given the very complicated procedures we were involved in. So, some of the work is actually ongoing and is therefore subject to change as we learn more or stumble across better ways of doing things. As a

check on ourselves, we did try in a seminar-type setting to expose all the work to all the people in the Federal Reserve System who were working on this project [for their critical evaluation]. And on two of the crucial pieces, those by Mr. Tinsley and Mr. Lindsey, we did have a conference with academic economists--Messrs. Brunner, Meltzer, Rashe, Pierce, Kareken, and LeRoy--to have input from that end and to expose our work not exactly to disinterested observers but to, we would hope, rather critical observers. And I think that our work there survived rather well and did have some impact on their thinking.

With that background, I'll try to generalize the findings even more than they are generalized in the discussion paper. One principal finding--and again this is not a matter of logic but partly a matter of logic and partly just a matter of judgmental analysis--was that 1980 was a rather special year, mainly because of the credit control program and also, I believe, because of the dynamics of inflationary expectations. The latter led to very much higher interest rates than otherwise would have developed, which I think set off apparent sizable further efforts by the public to economize on cash as those high interest rates developed. So, I think the special nature of the year gave us very pronounced disturbances in the market for goods and services, which were set off by the credit control program, and pronounced disturbances on the side of money, which were set off by the very high interest rates that developed very early in the year. And some of these developments actually were occurring [concurrently], which tended to confuse some of the econometric models.

Another general conclusion I would draw is that so far as we could tell, because of these external shocks, much of the interest rate and money variation was probably not intrinsic to the procedures but derived from the large-scale shocks external to the Federal Reserve [impinging upon] monetary policy against which the procedures were working. That is an odd assertion. In some of the work that Mr. Tinsley did, using the model constructed over the past 10 or 15 years, he tried to see whether the results of the year fell within a confidence interval one would expect, given the average of the past 10 or 15 years. And he found that for the most part they fell at the lower end of the confidence interval or below. So, just from that kind of simulation, it looked as if it was a rather special year.

Another conclusion is that on a more technical level it seemed that our procedures performed reasonably well in the present institutional environment relative to the simulated options; and I think that was the conclusion drawn by our academic consultants also in that conference we had with them. That is, we could not assert from what we found statistically that we would have gotten better control of money if we had just used as the criterion the monetary base or total reserves over a period of one month and probably not over a period of three months in the present institutional environment. Indeed, it did look as if control of the base or total reserves might even have made for less control over money in the present institutional environment. Now, it is of some interest just to indicate why that turned out to be so; it turned out to be so because I think we all tended to underestimate what we call our [money] supply-side disturbances. That is, there were shifts in the deposit mix, with more CDs, meaning a need for more required reserves. And unless [the needed reserves are] provided--if we just hit our

total reserves or total base target and don't provide them--we immediately would get less money supply because the reserves aren't there and [we would get] higher interest rates in consequence of less money, given short-run money demand. And unless we have made multiplier adjustments or have made a good guess about what the multiplier is, we would get these erratic money supply movements if we were following total reserves or a total base target because of these supply-side disturbances--not demand-for-money disturbances, but the [money] supply-side disturbances. And, of course, the models we work with don't allow for that. So, our conclusion was that it would be very important to have judgmental multiplier adjustments if we were to work on total reserves or the total base, certainly in the present institutional environment.

Now, with institutional changes, it did appear that we could do very well with a total reserve or total base aggregate; we'd make the obvious institutional changes that I don't think I need to detail for all of you. Some of this will [be discussed] later. But our evidence, again working from the model, was that we'd do better with total reserves in that context than the base because in the end we would still have the institutional supply-side problem that currency has a 100 percent reserve requirement and deposits have a fraction of that reserve requirement. So, changes in the mix of currency and deposits seem to have bigger disturbing effects in the multiplier if one works with the base than if one works with total reserves. Another conclusion we reached--and it seemed fairly clear--is that more precise month-to-month control in money is likely to lead to greater interest rate volatility. Indeed, the more precise we try to make it--that is, the more we try to hit it month-to-month instead of letting it average out over a 2- or 3- or 4-month period--the more interest rate volatility there is likely to be. And this is a result of what seems to be a rather inelastic money demand in the short run; that is, in a week or two or three or whatever time affects the monthly average, it takes one heck of a lot of interest rate change to make people want to hold less or more money than they otherwise wanted to hold when there is a normal, and often random, flow of funds in the economy.

Finally, as a general finding, we detected little need for precise month-to-month money control on economic grounds. It appeared that significant economic effects are more likely to appear after three months or so than before, clearly. Some work Mr. Enzler did gives us an order of magnitude of the effect [on GNP] if we were off path for six months. It turned out, for example, that if money was growing faster than target by 2 percent at an annual rate over a 6-month period, we might get a higher nominal GNP of about 1/2 percent at an annual rate. So, it's after six months that there gets to be a little but nontrivial effect; it depends on your values and preferences. But [such a divergence for] three months is rather trivial in terms of its effect, and much of the 6-month effect is offset later if you undershoot later; it's not offset, of course, if you don't undershoot but just go back to the original level that you had.

Let me say a few words, Mr. Chairman, if I may, about the implications. I'd first like to note the advantages of the present target procedure, which is a procedure in which we use nonborrowed reserves as a day-to-day or week-to-week target but take total

reserves as a general guide so that adjustments are sometimes made to the nonborrowed target because of what is happening to total reserves. This procedure can be viewed as something of a compromise because it is somewhat accommodative to deviations of money from the demand side. That is, when money demand is strong--and it could be strong for random reasons, as Dave Pierce's paper showed, because there's a lot of noise in the money [stock] weekly and even monthly--there is a degree of accommodation; borrowing goes up. But it is not total accommodation because interest rates also go up. So the procedure in some sense involves a degree of accommodation to money demand shifts. If disturbances are from the goods market, there is a degree of offset; it's the other side of the degree of accommodation, because if there's an increase in spending and an increase in money for transactions purposes, then there's pressure against that and interest rates go up. This is not a bad thing because the economy, so far as we could tell, last year showed evidence of both types of shocks in it; indeed, since the mid-1970s there have been considerable money demand shocks. So, there is something to be said for a target that compromises between these two and gives the Committee time at subsequent meetings to make a judgment as to how it wants to weigh what is going on in the economy, particularly since in the 1-month interval it doesn't look as if anything very fatal can happen to the economy from that kind of compromise. In a sense, the present procedures are a reasonable compromise. But because the discount window isn't entirely open--if it were, then we'd be accommodative entirely to all money demand [variation] whether it was a shift [relative to spending or not--I'd say the compromise is weighted to assuming that the shocks probably are mainly from the goods market. But that represents a judgment on my part.

If the Committee wants more short-run precision and control of money than it now has, there are a number of suggestions that come out of the study. I would say that last year we did detect a little more slippage in the way the control procedures have been run and have worked than one might have expected in advance. I [use as] the criterion that what one might have expected in advance was not so much the 1-month slippage but the gain in precision if one goes from one month to three months. If you look at the control horizon, it's three months. And the gain in precision we got last year and actually how the procedures worked out was less than the gain in precision one might have expected just from averaging out a bunch of random errors in the money to reserve relationship. That means there may be something somewhat systematic [happening] there. And that systematic thing could have been exogenous, in that it just sort of happened that way, or there could be things in the procedures that we could improve.

Now most of the things that one would think of improving go in the direction of playing the game as if we were operating on total reserves because, while they don't bear a close relationship in the models, once we abstract from all the things that the models can't abstract from--which include the reserve requirement structures and things like that--then the relationship gets closer. The evidence we developed indicates that; much of that is in Mr. Lindsey's tables. So, one way of pretending that you're a bit more on a total reserves target is to adjust the nonborrowed path more quickly when total reserves are strong or weak relative to path--that is, of course, with total reserves strong or weak properly adjusted for multiplier shifts to the extent that we can detect them. That would be one method of

pretending we were tending more to follow total reserves. Another method would be to employ the discount rate more actively, which in some sense is very similar to adjusting the nonborrowed path. In one case, if total reserves are strong, you provide less nonborrowed reserves. In another case, if total reserves are strong, you raise the discount rate and provide less incentive to borrow. So the two methods are tantamount in a way to the same thing. In some subtle sense of policy strategy, there are differences; but in a technical sense they're tantamount to the same thing. You are trying to control total reserves either by holding back on nonborrowed reserves or by holding back on borrowings or vice versa if [total reserves] are weak.

Another possibility is to restructure the discount window so that the demand for borrowing is more certain. That's a much more controversial question and it tends to limit in a sense the System's flexibility if pursued very far. We discussed that at length in Mr. Keir's paper and in the summary document. I'll only mention that there are two extremes to consider: One is to close the window entirely except for emergency borrowing, which would really convert the nonborrowed path to a total reserves path; the other is to open it entirely, and that would give you a structured discount rate possibility so that as borrowing rises, interest rates would rise and some resistance would develop, somewhat like now, to increases in money above path. Of course, if we didn't have that structured discount rate--if there were just a flat discount rate and an open window--then the increase in borrowed reserves would be tantamount to nonborrowed reserves. Even with a structured discount rate, I think this kind of technique would make the highest discount rate the top of the funds rate [band]; the funds rate would never go above it and it would elevate the discount rate as an instrument of policy to an even more important [position] than it could be under the present way we operate. It's not a more important instrument of policy now but it could be; and if the discount window were restructured, it could become even more important. The variability of borrowing [demand] that we've been so suffering with and unable to predict to any great extent this year--and the evidence of last year is that it did become more variable--so far as one could determine must have had to do with administration of the window because if the window were open and there were no problem with borrowing, presumably banks would use it. And if it were closed, there wouldn't be any administration to worry about. So there's something in the interaction between the way the discount window is administered and how banks view the administration that causes a variability in the borrowing demand that is difficult to predict.

On other matters, it was difficult to find anything that would say that a shift to contemporaneous reserve accounting would not help short-run money control, particularly if we were on any kind of even shadow total reserves target. On the other hand, it was difficult to argue that maintaining lagged reserve accounting would be a major deficiency if our horizon were something like a 3-month period. I did not take a staff vote on any of these matters, but I think the people who worked mostly in the Lindsey-type area do prefer a shift to contemporaneous reserve accounting. Finally, on these particular points, if you want to control a narrower aggregate like M1-B, then it's obvious--again, if you're playing a shadow total reserve game--that you ought to remove the reserve requirement on nonpersonal time deposits. If you want to control the broader

aggregates, you have a considerable problem because you don't have the legal possibility of putting reserves on most [of the components] of those broader aggregates, even those that are held at banks and thrift institutions. So, by their nature they are going to be more difficult to control with a reserve technique than the narrower aggregates.

All of these changes that one could suggest--some of them are small and some of them are large--structurally would lead so far as we could tell to more short-run volatility in interest rates in the degree that they reduce short-run accommodation to random money supply movements. So, in a sense, if you're organizing the system to achieve precise month-to-month control of money, we believe that would give you greater short-run volatility in interest rates unless you're fortunate enough to predict exactly the amount of money the market happens to want [in a particular] month. And given the amount of random noise in the money [stock], I suspect that's just purely impossible. However, these things would reduce the odds, I believe, on getting far off the long-run [money growth] path over a period of three months or so. I think they would have that constructive effect. So, even if they increased the volatility of interest rates in the short run, which is likely, you might get a little less intermediate-run fluctuation. That's because even with more volatile short-run movement, the trend up or down [in short-term interest rates] once you begin deviating--once money growth begins to get stronger or weaker--would begin sooner and with less of a lag than now, possibly. So, you would have less need for very high [rates later] because you would have gotten less far off [the money growth] path over a 3-month period. While it rather clearly gives you more short-run volatility in interest rates, it seems to me quite possible that you would reduce the highs and lows and the intermediate-run fluctuations in interest rates.

Finally, and on balance, Mr. Chairman, I don't think we found a clear need for overhauling our procedures radically; at least that's my conclusion. I'd say that was particularly so because it was also clear that last year may have been a special year in that the disturbances that hit the system from the economy occurred [not only] in the market for goods and services, which argues for a money supply target, but also to a great extent in the long-run and the short-run, that is the monthly, market for money, i.e. in money demand. And with those kinds of disturbances, the present procedures tend to be a rather reasonable compromise.

CHAIRMAN VOLCKER. I think it might be helpful if we divide the discussion up into more technical questions at the beginning and then more policy-oriented questions after that. In the area of technical conclusions or questions--I didn't bring the information with me--it might be useful if you reviewed some of the results that Mr. Lindsey had on the expected short-run instability in the money supply [from the use of] the technique.

MR. AXILROD. Well, Mr. Lindsey is here. If he would like to come up to the table, he could review very briefly the evidence from using total reserves, the total base, nonborrowed reserves, and the nonborrowed base from several models, as well as some of the results that the simulations suggested if we made some of these structural changes. That is mostly in Table 7 of your material, Dave?

MR. LINDSEY. That's right. For those of you who have the paper, you may turn to Table 7. We did try to construct various experiments that pretended we were on different operating targets with different reserve measures in turn and we asked ourselves: What is the minimum amount of variability of money month-to-month and also quarter-to-quarter that one might expect? We used two models under the current institutional structure: one developed some years ago by the Board's staff and one recently developed by the staff of the Federal Reserve Bank of San Francisco. The results appeared to indicate to us that, looking at month-to-month growth rate deviations of money from a targeted level, about the best we could expect to do under the current institutional structure was a month-to-month growth rate error on the order of, say, 5 to 10 percentage points under any reserve aggregate operating target.

MR. AXILROD. Plus or minus 5.

MR. LINDSEY. That's plus or minus 5 to 10, in terms of a standard error, which means that one-third of the time we would even be outside of that band. Those results applied to the nonborrowed reserves and nonborrowed base measures; they both gave very similar results. As a result of the supply-side problems that Mr. Axilrod discussed earlier, the [errors using] total reserves and total base measures under the current institutional structure were considerably larger than for the nonborrowed measures. So, that's the range of error in hitting your month-to-month money target with the current institutional structure. The actual misses were a bit above that for M-1A and around the upper end of that range for M-1B. Now, those did average out to some extent in the Board's monthly model over quarterly periods, as Mr. Axilrod mentioned--a bit more in fact than the actual experience quarterly. The Board's monthly model appeared to have errors month-to-month that were about random, so they would tend to cancel out partially as the period under consideration lengthened.

With the Board model we did look at a change in the institutional structure both in terms of trying to eliminate the supply-side errors that are susceptible to regulatory changes--eliminating lagged reserve accounting, making reserve requirements on demand deposits uniform and universal, toward which of course the Monetary Control Act will move us as it's phased in, as well as removing reserve requirements against savings and time deposits. And there once again I'm summarizing Mr. Axilrod's conclusions, but I'll give you some numerical examples. Total reserves improved considerably; in fact, it became the best operating target if rigidly adhered to over a control period, giving an error on the order of 3 percentage points plus or minus two-thirds of the time. Also, as Mr. Axilrod said, that would imply very significant [interest] rate volatility in response to unexpected shifts in money demand over the control period, which in this case is a month. So, it's not clear you'd want to control money that closely. But it would be feasible even, I might add, with the kinds of errors that we saw over the last 15 months since October 1979. We did try an example with the kind of graduated [discount] rate structure in the Board model that Mr. Axilrod referred to and we did get some improvement--on the order of 2 percentage points--with the nonborrowed reserves and nonborrowed base targets. That gives you a sense of the range of variability under different operating targets and different institutional structures month-to-month. Looking at annual rates, even under the present

operating structure, it looked as though for a 3-month or quarterly period the errors by and large fell into a range of 1 to 2 percentage points in both the San Francisco and the Board models. As Mr. Axilrod mentioned, the actual errors were somewhat larger than that because there wasn't as much averaging out of the monthly errors in the actual experience as was the case with the models.

CHAIRMAN VOLCKER. Dr. Burns used to be fond of saying that for a monthly period, four equals eight on the money supply. As nearly as I can understand your results, in the present institutional settings, minus 10 equals plus 10.

MR. AXILROD. Well, Mr. Chairman, if I can translate that, I think he's saying minus 10 is as likely as plus 10 if you aim at zero.

CHAIRMAN VOLCKER. Right, if you're aiming at zero.

MR. ROOS. May I ask, Steve, is short-run month-to-month precision really important? I believe that even the most ardent advocates of aggregate control will freely admit that short-run precision is almost impossible to achieve. Is this a necessary factor in deciding what we're going to do? Or if we announce and make clear that we are going to concentrate on achievement of our longer-range target, wouldn't this be it?

MR. AXILROD. Well, very clearly, on economic grounds short-run precision isn't very necessary. So far as we can see, it has a disadvantage of much greater interest rate volatility. It's very hard to evaluate the implications of this greater volatility, but there are certain kinds of thin capital structures in the various markets for securities and [greater volatility] does tend to increase risks rather greatly because of that. But if I could translate your question a little, it's clear to me that if you could hit [a target] month-to-month precisely, these interest rate variations would go away over time. That's because as the market responded to them, then of course that would give you greater assurance of hitting it quarterly. That is, if you can hit it month-by-month, you can surely hit it quarterly. Clearly, it's more important to hit it quarterly than month-by-month. I'm trying to say the only importance of having a procedure that gives you better assurance [of hitting the target] month-by-month is that it gives you better assurance [of hitting it] quarterly. I have a feeling--and I'm not sure how we could test this--that you have better assurance of hitting it quarterly even if you don't have a lot of control month-by-month by aiming at it month-by-month; that would get you where you want to go in the quarter even though you can't hit a month-by-month target. I've gone around Robin Hood's barn a little in answering the question, but that's how I would perceive it.

MR. ROOS. But if one were skeptical of the long-term wisdom of pursuing our present policies of trying to control money and credit through aggregate control, one would not use the staff conclusions that month-to-month precision is difficult to achieve. That would not be a basis for walking away from considering the broader advantages or disadvantages of aggregate control.

MR. AXILROD. Oh, heaven's no! And that certainly was not the staff's conclusion.

MR. ROOS. Yes.

MR. WALLICH. Just to make sure I understand you, the quarterly precision results imply that one goes off one month or two but in the third month one returns to track. If one stays off track and comes back later than the third month, then there are more perceptible effects on the real sector. Is that right?

MR. AXILROD. That's right. That's what I was trying to say. Jerry Enzler's simulation showed that if growth is off 2 percent at an annual rate for two quarters, you'd have an impact of 1/2 percent at an annual rate on nominal GNP.

MR. WALLICH. How do we make that need to get back within the quarter, as it were, consistent with the [great] uncertainty--the very large standard error within a month of plus or minus 10 percent--if we really don't know in the first month where we are?

MR. AXILROD. Well, I think the answer is in part what I was trying to say in response to President Roos' question. To the degree that these are random errors, you keep aiming [at the path]. This month, let's say, you aim at the path and you go way over. Next month you keep aiming at the path and you may go way under, so in some sense you've averaged out. There's no reason to think that the errors are going to be persistent on one side or the other.

CHAIRMAN VOLCKER. Except that they seem to be, in fact.

MR. AXILROD. What we found in the past year was that, in fact, [the actual errors] didn't average out as well as the models averaged out. So it might lead you to think that there was something in the way the procedures were constructed or maneuvered that produced this result or that there was something in the economy that was more special [last] year. Of course, the models were confronted with that also; but that worked out in practice to give you these greater deviations. The simplest way to put it is that your average error in a month is .6, or 7.2 percent at an annual rate if you think of it as an absolute error. But if you think of it quarterly--the world isn't this way--but if you had plus .6 and minus .6 and plus .6 in each month of a quarter, then the absolute error that quarter because you're now averaging quarterly in absolute terms would work down to plus .2. With plus .6, minus .6, and plus .6, you'd be left with plus .2 [for the quarter]. According to the models, the errors aren't distributed in that nice way, so the improvement shouldn't be that spectacular. But [the improvement] ought to be more like .6 to .3 or something instead of .6 to .2. We got an improvement of .63 to .47 or something like that. It wasn't quite as good as some sort of random distribution of the multiplier errors would suggest, and that was the reason to think that there might be something more systematic [happening] or some way to operate the procedures that would get us there better.

MR. MAYO. Steve, does it make any difference in your analysis whether you aim at a fixed quarterly cleanup, so to speak, or a quarterly moving average?

MR. AXILROD. I don't think so. What we actually did in this test was to take each month's target and see if we were off and just

average each intermeeting target for 3 intermeeting periods as a way of viewing the random nature to see if, because of the random nature of the money supply multipliers, that [approach] would capture that. That is, if randomness had [produced] an upside shock in one period, it ought to end up [producing] a downside shock in the next period. We just averaged through that, so it wasn't a direct test of what you're asking. But I would say the answer to [your question] is probably no. One can conceive of a world where you're trying to get on a long-run path and you just keep aiming at that level each month to get you there, trying not to forget the past, and you're aiming at [unintelligible]. If two months from now you're supposed to be "here" and in one month you were "there," you'd still try to get "here" two months from now.

MR. MAYO. It may give you the illusion of a little less rigid definition of your intermediate goals, but I agree with you that it probably wouldn't make any real difference over a period of a year.

CHAIRMAN VOLCKER. Governor Schultz.

MR. SCHULTZ. I had a couple of questions, Steve. First, I noticed in the Bank of Canada's report to the United Kingdom that they indicated that they didn't believe fluctuations in the money supply [for periods] of less than six months made very much difference. Is that a judgmental [assessment] on their part or did they do some studies? Or would it really make any difference to us?

MR. AXILROD. Well, I assume they did some studies. I'm not acquainted with their model as far as what results it would give. I assume they have done the same kinds of studies we've done on running over or under path for given periods and determining how much effect on nominal GNP the model gives them. We used to say 6 months here; the lags seem to have gotten a little shorter, so 3 months seems a little safer. But, again, it depends on the magnitude of effect one is willing to tolerate. I ought to add in that respect, Governor Schultz, that none of the models takes account of the expectational reaction to what is going on in the money supply. The expectations are largely derived from past price behavior or past interest rate behavior to the extent [the models are looking at] interest rates or price expectations. And in this modern world I think [expectations are] an additional factor to take into account. That is, if you're running off path for 2 or 3 or 4 months, what will be the reaction in markets to that? You may get more prompt interest rate responses. You may get different kinds of pricing decisions than the models are suggesting.

MR. SCHULTZ. Well, that leads into my second question, which is essentially on the question of lag time. How good a handle can we get on that question, and does it make any difference at all or could it make any difference? If you look at the question of money supply on one hand and interest rates on the other, do you get a different feel for a lag time? That, of course, goes to my final question about whether interest rates have induced wider cyclical changes. If you make different assumptions about lag time, do you come to different conclusions on that question?

MR. AXILROD. We tried to examine some of the evidence on that and Mr. Enzler, who I don't think is here at the moment, did a

considerable amount of work in that area, both theoretically and using the model. You could construct a system where money demand was highly interest inelastic--much higher than it is, presumably--so you would have a lot of interest rate fluctuation when you tried to control that, and where there was no response in the economy in the current period but it occurred with a lag. Cycles in economic activity might begin to develop because you are controlling money. This is quite the opposite of what monetarists would contend. He could develop, with reasonable estimates or unreasonable estimates of interest elasticity, 4- or 5-year cycles. Last year, of course, our cycle was--

MR. PARTEE. Four or five years you said?

MR. AXILROD. Yes, with 4- or 5-year regularity. Last year our cycle was 3 or 4 months and that would imply a lot shorter lags than we discovered empirically and that are therefore embodied in our quarterly model. And given the fact that--

MR. WALLICH. Well, that was one of the things we learned: That the lags are shorter.

MR. PARTEE. [Unintelligible.]

MR. AXILROD. Unfortunately, there was a credit control program last year and there seems to be quite a correspondence between the behavior of consumer spending and the imposition of the credit control program and [subsequently] the reemergence of consumer spending and the phasing out of the credit control program. It's difficult to ignore that evidence. So, we concluded tentatively that the lags haven't gotten so short in relation to money policy and interest rate behavior as to make it likely that we're going to get consistent 3- and 6-month cycles as a result of a policy of trying to control money. I wouldn't say that that's impossible, really; but it just didn't seem consistent with the evidence of last year, given that the credit control program was a very big factor in the year.

MR. SCHULTZ. Does the evidence indicate that the higher interest rates go the shorter the lag time? Do you have any empirical data on that? Or do you get about the same kind of problem: That the credit controls have put you in such a situation that you can't come to any conclusion?

MR. AXILROD. Well, I wish Jerry [Enzler] were here, but I don't think we have evidence that says the lag time is related to the level of interest rates. But, of course, the higher the interest rates, the more there is a current reaction, given a lag, because it's just multiplied; if interest rates go up 20 percent instead of 10 percent, you get more effect given any lag structure right away because the 20 percent is bigger. If you're going to get a 1 percent effect right away out of 10 percent, you'd get 2 percent out of 20 percent. So it's simply that you get more power right away, but it's the same kind of lag structure.

MR. SCHULTZ. Final question. When you were looking at the discount rate, did you look at the possibility of varying the discount rate with some relation to the capital ratios of the borrowing institutions?

MR. AXILROD. No, we did not.

MR. SCHULTZ. The reason I asked is that it is clear that interest rate spreads seem to have more effect at this point than interest rate levels. And, obviously, the larger banks tend to be doing the biggest borrowing. And they're the ones that are more concerned with interest rate spreads because they can go out and buy their money more easily. If [borrowing] had some connection with capital ratios, wouldn't it have some interesting effects on [the amount of] borrowing? Is it worth thinking about?

MR. AXILROD. Well, it's certainly worth thinking about. As I say, we didn't consider it. The types of structures we did consider were to try to increase rates as the amount of borrowing went up; and, depending on how you do it, that could have an effect on larger banks relative to smaller banks. The surcharge, of course, affects mainly the larger banks where the capital ratios are low. So, I think in practice, particularly now, much of that is taken into account. But we could certainly consider it. The legality of it would be something I would wonder about also. But it's certainly something to be considered.

CHAIRMAN VOLCKER. Governor Partee.

MR. PARTEE. I just wanted to ask a question, a point of clarification, about this business of departures from path. I think we run into semantic difficulties because some people think of the path as a rate of increase in an aggregate and other people think of it as observations of the desired level over time. I think it's awfully important that we all understand how the experiment was done. Now, when Jerry introduced a departure from path--he's here now--that was, say, the correction in the second quarter or the third quarter or whatever his periodicity was, was the correction such that he reduced the growth rate as much below path as it had been above path before? What was done?

MR. AXILROD. It was run two different ways. First, if you were above path in the first quarter--your path level was here and you ended up there--in the second quarter you would go back to path. You'd reduce the growth rate in the second quarter but just enough to get you back to the long-run path level. The second kind of experiment was that if you were above the path in the first quarter, you'd [aim] below path in the second quarter and go back to path in the third quarter and continue on.

MR. PARTEE. So that in some sense for a longer period the average amount of money was the same as it otherwise--

MR. AXILROD. That's right. For example, if growth is over [path by] 1 percent on average for 2 quarterly periods and then goes back to path, you obviously have more money in there on average than if you'd been on the path consistently and also more money on average than if you had gone under path before.

MR. PARTEE. In the first case, you'd have a rather lasting effect on the GNP.

MR. AXILROD. That's right. In the second case it tends to offset. Now, the Committee targets are more like the first case because they are measured QIV to QIV, so you have a QIV average level that you get back to. So the way the Committee has set its targets is much more like the case of being over and then going back to the path instead of going under.

MR. PARTEE. So there could be some residual GNP effects in what our current path structure is?

MR. AXILROD. Yes, if it works out that way.

CHAIRMAN VOLCKER. Mr. Ford.

MR. FORD. I also want a clarification of what you did with regard to your discount rate sensitivity studies. A priori one would expect to see the amount of borrowing out of line with your plan the greater the differential between the effective rate at the window and the effective comparable rate in the market. But the amount of borrowing is obviously conditioned by the administration of the window. Did you find as we hit periods of time when the spread widened between the effective rate at the window and market rates--say, for CDs adjusted for reserves--more problems with the borrowing at the window or not?

MR. LINDSEY. Well, I was just going to say that in the experiment I referred to we essentially took the monthly model, which has borrowings as a function of the spread of the funds rate over the discount rate and we eliminated--

MR. FORD. Which discount rate, with or without the differential?

MR. LINDSEY. Essentially without the surcharge. Is that what you mean?

MR. FORD. Yes. In other words, you did it against the nominal discount rate rather than the one that affects the larger banks.

MR. LINDSEY. Yes. What we essentially did was to take account of the effects of the surcharge and other sources of error by suppressing the error in that equation in the model completely. What we had, then, was a perfectly known function of borrowing with respect to the spread of the funds rate over the discount rate. And what that meant was that it really didn't matter whether the funds rate was a little over the discount rate or a lot over the discount rate in that model simulation because we knew exactly how much borrowing would come out of that. And then we just simulated the model accordingly. We really didn't address your specific question in that model run. We addressed another question, which was: How closely could money have been controlled if we had had this graduated discount rate structure that would tend to eliminate the noise in the amount of discount window borrowing as a function of the funds rate/discount rate spread?

MR. FORD. In other words, we don't know for sure that we would have had less problems with the borrowing track if, for

instance, we had [operated] the window with a penalty rate [over] the funds rate or something like that?

MR. LINDSEY. That was one we didn't explicitly look at, although we did look at the case where total reserves were simply held fixed. And, as Mr. Axilrod mentioned, the case where you have the penalty rate--where it is always a penalty or you just close the window to borrowings other than emergency borrowings--you essentially create a total reserves kind of target because nonborrowed and total move together. So, in that sense we did examine that second case as well.

CHAIRMAN VOLCKER. I'm not sure I understand the question.

MR. AXILROD. I was going to say that I thought one of the things you were asking, President Ford, was: Did we have more trouble predicting demand for borrowing as the market rates widened above the discount rate? I just checked with Mr. Johnson, who did some regressions and looked at that material, and his response coincides with my memory or lack of memory, which is that I can't recall that we did have any more trouble with wide spreads than we did with relatively narrow spreads. But it may be--

MR. PARTEE. We, of course, had more borrowing.

MR. AXILROD. We had more borrowing; trouble in predicting the borrowing, I don't think we had.

CHAIRMAN VOLCKER. The borrowing is not controlled by the spread; the spread is controlled by the borrowing.

MR. AXILROD. Or something.

CHAIRMAN VOLCKER. Should we go over it once again? We have lagged reserve accounting in the present institutional setting. Mr. Axilrod and Mr. Sternlight are setting the level of nonborrowed reserves. That decision sets the level of borrowing. The market rate of interest at which that borrowing takes place is determined by the banks, but not the level of the borrowing.

MR. FORD. We observed that the amount of borrowing we predict is--

CHAIRMAN VOLCKER. You observed that the higher the borrowing, the higher the spread. The causation is the opposite way than you are suggesting.

MR. AXILROD. What would happen when the demand for borrowing is elusive is that in the end the funds rate would turn out to be different than we expected. We force the borrowing on them but then the funds rate might be different from what we expected, if we start from that point of view.

MR. FORD. I guess, Paul, I have the bias of someone who has been involved in it on the other side. That is, as I understand my micro-economics, it says that the inducement to a profit-making bank to come to the window is higher the greater the spread. All I'm asking is--

CHAIRMAN VOLCKER. Exactly. When you look at it from the standpoint of an individual bank, that's the way it looks. But how is the total amount of borrowing determined? It's determined by the difference between the reserve requirement and the amount of nonborrowed reserves. And when all the individual banks [in some] form or guise come in to borrow and when they've borrowed enough to meet the total reserve requirement, they stop borrowing. It looks as if it's your individual [bank's] decision, but it is not. It's ours in the aggregate.

MR. PARTEE. Well, that's a static analysis, Paul. I agree with you; it's absolutely true arithmetically. But I think what happens is that you set into process dynamics that in fact [produce] required reserves that can do that.

CHAIRMAN VOLCKER. You do that by the fluctuations in market rates, which are affected by the discount rate. The discount rate will affect the level of market rates but not the spread, and that will set in motion the dynamics.

MR. PARTEE. But my point is that if in period 2 we raise the discount rate in order to try to close the spread, we can get a higher funds rate pretty [quickly]. A higher funds rate will bring about--

CHAIRMAN VOLCKER. And that would bring the money supply down, so it brings down the--

MR. PARTEE. And then you'll have a narrowing in the spread, you see, in subsequent periods.

VICE CHAIRMAN SOLOMON. But it's the banks individually, of course, that decide how much excess reserves they want to keep.

CHAIRMAN VOLCKER. If that varies.

MR. AXILROD. Mr. Chairman, maybe I should try to be clearer. Where the demand for borrowing--the lack of knowledge of it--gets us in trouble is this: We believe, as the Chairman said, that it's the rise or decline of interest rates that sets in motion forces that get you back on your money supply path. And the theory of all this was that as required reserves strengthened, borrowing would have to go up because Mr. Sternlight isn't going to provide those additional reserves; and with the rise in borrowing, the funds rate and [other] interest rates would have to go up, setting in motion these forces. And what throws us off sometimes is that on occasion the borrowing will go up but interest rates won't. On occasion there's not that kind of consistency and we get delayed; and then what further throws us off is that the borrowing might go up and the interest rates might go up but not enough and we really ought to be lowering the nonborrowed path and forcing more current rate fluctuation. That's what we tend to mean when we say the demand for borrowing is a problem. Sometimes banks are more willing to borrow than at other times and we don't get the kind of rate response we think would develop in [these circumstances].

MR. FORD. The bottom line of what I'm trying to get at is this: On the basis of your research, if we did two things that have already been discussed--one is to get to contemporaneous reserve

accounting and second is to make the window more directly related to market rates--rather than the lags that we now have, would the procedure otherwise be improved overall or not? Do we gain nothing by doing that?

MR. AXILROD. The evidence that Dave Lindsey has developed would say that contemporaneous reserve accounting would clearly improve the multiplier between total reserves and money in the short run. I think that would clearly happen. It would mean that in the very short run, like a week, we wouldn't be able to predict required reserves very well, so the funds rate might vary a bit more for any given nonborrowed target. So, it would have that "cost," if that's a cost. But, on your other question, I was unable to convince myself--maybe others have convinced themselves and if they have, then they should speak up--that tying the discount rate [to market rates] would make [the relationship] between reserves and money a lot more predictable. Even if we had a penalty rate, if money got created this week like mad--and it might--then because Mr. Sternlight is holding back on nonborrowed reserves, market rates would jump well above the penalty rate. So we'd get a sharp rise in market rates and then of course we'd have to reset the penalty rate above that; and unless the money supply responded very promptly that week, we'd get another ratcheting up of rates and that sharp rise in rates might cause the money supply to drop rather substantially. And we'd end up chasing our tail a bit, particularly if [money] were to drop substantially [and] randomly in any event. So, I can't believe that tying the discount rate [to market rates] would give us more predictable borrowing; but it would, I think, more predictably and probably more certainly, force rates up faster or force them down faster. And [some may] consider it [desirable] to have that advantage; but that's about the only advantage I could come up with.

CHAIRMAN VOLCKER. Mr. Corrigan.

MR. CORRIGAN. Steve, or Dave, or whoever, on this business about random monthly or weekly movements of money: Is there anything in your work that sheds light on the question of how you know when it stops being random? My casual observation here--I hear your pluses and minuses--is that it always seems that once the thing starts to go, it cumulates [in one direction]. It isn't a plus and minus relationship.

MR. AXILROD. All we could come up with is that as the time lengthens, it gets less and less random. We, too, have observed that the revisions seem to be consistently up or consistently down over intervals of a month or so. And we have not yet shaken the resources loose to finish the project of examining the sources of those revisions to see if there is any bias evolving as we get into a period when the revisions are moving up or moving down. But I don't think that relates particularly to the material that Dave Pierce worked on because, after all was said and done, it still looked as if there was a substantial amount of noise, so to speak, which included anticipating next year's seasonals in the weekly series less than the monthly, less than the quarterly, etc.

MR. CORRIGAN. So, there's nothing here that really bears on how we know whether we should consider something random or not in the short run?

MR. AXILROD. No. If it's plus or minus \$3.3 billion, two-thirds of the time it's noise in a weekly series and we show a zero; we don't know whether that zero has a +\$3.3 billion of noise in it offset by a -\$3.3 billion of trend.

MR. LINDSEY. It is true that over time that \$3.3 billion falls. For a month, for example, the random noise in the change is \$2.0 billion. So, as time progresses, the range of uncertainty about whether it's random or not narrows.

MR. MAYO. The \$3.3 billion was weekly?

MR. LINDSEY. That was weekly; and the \$2.0 billion was for a monthly change.

MR. BALLE. Steve, are the X-11 program and other seasonal programs still showing about a 3-month span of time in which to suppress these random movements so that trend shows through? That was my recollection, but I haven't looked at that in a long time.

Mr. AXILROD. They keep perfecting those programs, President Balles, and I'm not sure what that is.

MS. TEETERS. Well, my impression is similar to Jerry's, because we did have these long strings of upward revisions and then long strings of downward revisions. I thought you implied, Steve, that the fact that we get a long string of upward revisions or downward revisions comes from external factors. Is it possible that these errors in the money supply are leading indicators of economic activity? In other words, if they are all going up, we may be seeing a sharper rise, say, in the goods sector than we had anticipated--or [conversely], a sharper fall. Is that possible?

MR. AXILROD. Well, that was one feeling we had when we were living through it, in periods such as April and then in the summer. We had that feeling [in April] when the economy was weaker than expected and the revisions in the money supply between the preliminary and the first published [number and] between the first published and the second published [number] were showing a weakening in the money supply. And we had that feeling in the summer when the economy was turning out stronger than expected that those revisions were [all] going the same way. That sounds as if there's a ghost operating two machines--the economy and the money supply. There's not much reason, if the data we get are coming through in some sort of "unbiased" way, for those things to happen that way. I don't have any response other than to say that we are trying to see if that was really true and what the sources were. The only thing we could think of offhand was that some of the original data, particularly the preliminary data that we don't publish, have a good deal of estimating in them. And if we are in a period when the money supply is dropping sharply, the estimators--either at the Reserve Banks or the [commercial] banks--put in last week's figure, but they should have been lowering last week's figure; so, we get that more systematic kind of bias. I don't have the evidence yet to say whether that was indeed what was happening. [We don't know] whether we have a coincidence or whether our instincts of what was happening were not right.

MS. TEETERS. I have a second question. The studies distinctly show that fluctuations in the short-term rate got transmitted much more thoroughly to the other rates in the [financial] system, long rates as well as short rates. Did we find any evidence that the increased fluctuations of the longer rates were interfering with or changing investment patterns?

MR. AXILROD. Well, I think the answer to that is probably "no," because of the length of lags in our big model between long-term rates and investment plans. We didn't see evidence in 1980--this is what I am remembering from the paper that Ed McKelvy and Larry Slifman did--that there was much of a response in investments to the kind of interest rate fluctuations we were getting. Moreover, we couldn't find evidence that long-term rates were made higher in some sense than they otherwise would have been because of the uncertainties created by the operating procedure. That is, we couldn't find much evidence that a liquidity premium was developing which would have lowered short rates from what they otherwise would have been and raised long rates from what they otherwise would have been. The latter, of course, would be a damper on investment but with some lag. So, in general, we were not really able to investigate, except through models or judgmentally looking at the economy, the possibility of some impact of greater week-to-week fluctuations in interest rates, short and long, on business planning. That's an area we just--

MS. TEETERS. You are dealing with a model that was built on much lower variability in long-term rates, so that sort of constrained your conclusions.

MR. AXILROD. Exactly. One could not say that there was no impact of this kind of interest rate variability on business planning. It was rather difficult for us to detect it or to find out how to measure it, really.

CHAIRMAN VOLCKER. Governor Rice.

MR. RICE. During the period of the study, it appeared that the broader the monetary aggregate targeted, the less variability from these targets. I think that's true. Was there anything in the study that would suggest that that would always be true--that there would be less variability in, say, M2 than in M-1A or M-1B?

MR. AXILROD. My memory, looking at it another way, is that the monthly multiplier errors, at least in the models, were bigger on M2 than they were on M-1B but that our judgmental miss--judgmental meaning how we actually ran things--was less on M2 percentage-wise than on M-1B in terms of the growth rates. I'm not sure whether I have answered your question exactly.

MR. RICE. Well, I think that M2 deviated less from its target range than did M-1A and M-1B from their target ranges.

MR. AXILROD. Yes, exactly. That's right.

MR. RICE. That was the question I was raising--whether there was anything in the studies that suggested that would go on in the future.

MR. AXILROD. No, only if the past is any guide to the future. And on that I would say that in the future M2 gradually will have less and less assets in it that are subject to reserve requirements because [such requirements] are being phased out at member banks. Savings and small time deposits at member banks will no longer be subject to reserve requirements and certainly are not now at thrift institutions and nonmember banks. So, whether that will pertain in the future or not, I'm really not certain. Nor do I know if it would pertain if we really aimed at M2. We were aiming at M-1B here or at M-1A; we weren't really aiming at M2.

MR. SCHULTZ. Isn't it true that there are certain countercyclical elements in the broader aggregates because of their composition? That is, if the economy begins to slow down, isn't there a tendency for people to put more money into some of the assets that are in the broader aggregates rather than in the narrow aggregates? Is there not a countercyclical movement in the broader aggregates? So, would it not basically be true that what Governor Rice has said is accurate because of the composition of the broader aggregates?

MR. AXILROD. I thought Governor Rice was raising the question [of what would happen if] we were aiming at the target, which is different from what would happen to these [aggregates] over the cycle. It's quite possible, though I just don't remember. We didn't look at that in detail. But M2 might have a little less volatility over the cycle than M1; one would think that would be the case because it has higher interest elasticity of demand and M1 is much more sensitive to income.

MR. PARTEE. [Unintelligible] savings accounts.

MR. SCHULTZ. Yes, I think John Paulus just did something on that [suggesting] that the narrower aggregates were better to look at than the broader ones because of this countercyclical effect of the broader aggregates.

MR. MORRIS. Yes, but he ignored the fact that the statistical relationship between the broader aggregates and nominal GNP is much closer than the relationship between the narrower aggregates [and GNP]. It seems to me--

MR. AXILROD. That depends on whose model and what time period.

MR. MORRIS. I don't think that's true. If you were to take, say, the pre-1970 data and estimate GNP in the past 10 years, there is no question that the broader the aggregate, the better estimate you would have made, no matter what kind of model you were using.

MR. AXILROD. Well, I don't want to quarrel with your conclusion in particular. What I have been exposed to shows--and my memory may be wrong--that you can come to virtually any conclusion you want, with virtually any aggregate, in large part depending on how you do it, but probably based on the premise that everything tends to go up and down with GNP. There are big differences; the broader the aggregate, the more it tends to go up and down with GNP. Sometimes you can even find that total credit goes very well with GNP but there is a cause and effect problem there. The world turns out very

differently depending on what determinants you control. In this study it was shown that the monetary base goes very well with money. That happened to be because we were controlling the federal funds rate. They went up and down together. If we turned the world upside down and tried to control the monetary base, it didn't look to us from that experiment that it went very well with money because one would be in a different kind of world. So, without trying to contradict you directly, I'd view all that with considerable caution.

CHAIRMAN VOLCKER. Mr. Boehne.

MR. RICE. Well, I have a second question.

CHAIRMAN VOLCKER. Mr. Rice.

MR. RICE. Was there anything in the study that would suggest what the most appropriate [width of the] target ranges would be? Would the most appropriate range be, say, 2 or 2-1/2 or 3 percentage points?

MR. AXILROD. No, there was not.

MR. BOEHNE. I'd like to switch away from the financial side to the real sector side. I was somewhat surprised that you didn't lend much credence to the view that these fluctuating interest rates had some kind of destabilizing feedback effect on the real sector, especially since interest rates other than the federal funds rate did seem to go up with the same amount of volatility. That's rather a casual analysis, [based] especially on talking to people in construction and to some extent in autos and some other durable goods [industries] where inventory was important. I had a very definite impression that these fluctuating interest rates did have an impact on economic activity in their areas. I was wondering if your analysis was largely econometric or if you attempted to gather any information from the people who are actually in these industries.

MR. AXILROD. Well, we had a very difficult time, as you might guess, trying to distinguish between interest rate fluctuations that were a result of our procedures week-to-week or month-to-month and interest rate fluctuations that reflected what was going on in the economy, given the System's money supply targets. As we went into the year, most people would have expected that if interest rates rose, we would have had a sharp drop. For a while we fiddled with the idea of developing what economists, taking the words of philosophers, have begun to call counter-factual worlds, and pretending that we knew what the Committee would have done if they were on the old procedures. After two or three what I thought were abortive attempts at that, I thought the safest thing--in fact I might say the only intelligent thing to do--was not to do that, because who knows what the Committee really would have done in this very unique period. So, we didn't try to construct the world based on the funds rate moving only a quarter of a point or a half point. We in no way meant to say that housing wasn't affected by the rise in rates that occurred or wasn't aided by the decline in rates that occurred. But it looked as if the decline in rates that occurred in the second quarter was not out of keeping with the weakness in the economy in that quarter, so that we normally would have gotten that [decline] no matter what procedure the Committee was [following]. The question was how fast. However, we

could not ignore the fact that there was a credit control program that went off in that period. It looked as if the sharp drop in GNP was also caused by the credit control program [and that to an] extent the rebound in the third quarter was affected by the phasing out of the program. So we were driven to a rather weak conclusion that the procedures themselves may have hastened the rise in interest rates and hastened the decline in rates and, therefore, induced the drop a little earlier and moderated the decline. That was our weak conclusion because we really expected that under any control procedure, given those money targets, we would have had that cycle developing. Maybe that isn't stated as clearly as it might be, but that's the basis for saying that the procedures as such might have had what looked like other minor effects. We didn't think that monetary policy did.

MR. BOEHNE. Thank you.

CHAIRMAN VOLCKER. Mr. Black.

MR. BLACK. Steve, you made the point a while ago that under the existing institutional set-up the main thing--or maybe even the only thing--that brings the money supply back to target, if it deviates, is a change in interest rates. If I understand the way you view this, my guess is that you would think about that mainly as the effect of interest rates on the level of money demanded. Do you also think that the changes in the level of interest rates have any significant effect on the supply function of money by affecting banks and other financial institutions' attitudes with regard to how much money they create?

MR. AXILROD. Oh, sure. It can get you into all sorts of multiplier problems because of the mix of deposits, if there is any response of bank excess reserves--we don't think there is much--and also questions about the demand for borrowing if you are on a nonborrowed target. So, I do think that interest rates react both to the demand for money and the supply of money functions. The inability of our monthly money market model, for example, to examine and to allow for variations in the supply function are what throws it very far off. Its ability to predict interest rates that might emerge from money demand/money supply interactions is, on the other hand, what gave it a little better track record than we had judgmentally last year. Judgmentally last year, in some sense, we didn't have it right; we weren't able to say interest rates would go up fast enough or down fast enough. Therefore, in determining the path, we were unable to set borrowings high enough or low enough to begin with and, if we began to get off, we didn't make adjustments fast enough. But I do believe it would have an effect on the supply function.

CHAIRMAN VOLCKER. Mr. Balles.

MR. BALLE. First of all, Mr. Chairman, I would like to say that this whole study was quite impressive--it produced some very useful results--especially given the time constraints that the staff had to wrestle with, not to mention all the exogenous shocks [to] the economy as the year went on that they had to try to sort out. My question at this point, Steve, is with respect to what I consider one of two parts of your summary memo. You point out various options that the Committee might adopt if it wanted closer control over money. You

mentioned adjusting the nonborrowed reserve path more quickly, using the discount rate more actively, and this rather extreme proposal with respect to the discount window--either to close it down altogether or open it altogether. The latter option is pretty far out, so I'd like to concentrate on the first two. I'd ask you in your judgment which one would be the more promising, since you have been so much involved in having to construct these paths. That is, do you think it would be more feasible to adjust the nonborrowed reserve path more quickly and by greater amounts, or would you recommend that we do what we thought we were going to do in October of '79, which is to adjust the discount rate more actively?

MR. AXILROD. Well, as a matter of tactics, I would be more inclined to start with adjusting the nonborrowed path because you can undo that more easily if it turns out, as it may, that you've made a wrong adjustment and want to undo it. When you are really rather more certain that you want to force interest rates up or down faster than they are going, then it strikes me, again, as a matter of tactics that it's "better" in some sense to use the discount rate because it is a more forthright, clear announcement to the market. But in periods when you are a little more uncertain, which will probably be a large proportion of the periods, then it seems to me that adjusting the nonborrowed path, pretending you are more on total reserves, is a reasonable approach for putting pressure on market rates that you may want to undo later if it turned out to have been a wrong thing to do.

MR. BALLE. Well, if I could pursue it just one more step: As you reflect on our experience since October '79, if one had the opportunity to do things all over again, so to speak, and do them differently, would you recommend with this benefit of hindsight that we might have used the discount rate more actively? Or are you relatively satisfied with how things came out?

MR. AXILROD. Well, that's a difficult question--

MR. BALLE. I know.

MR. AXILROD. --to respond to, President Balles, because with hindsight I might not have adopted the paths the Committee adopted.

MR. BALLE. Okay, I withdraw the question.

CHAIRMAN VOLCKER. Mr. Morris.

MR. MORRIS. Well, the principal tool the Manager has to deal with an overshoot or an undershoot of total reserves is his ability to adjust the nonborrowed path. Last summer and early fall when I raised questions on this issue, you apparently had found a rule of thumb that you would adjust the nonborrowed path by half of the deviation of total reserves from the path on the grounds, I assume, that it was not clear whether this [deviation] was evidence that the economy was stronger or whether we had an increase in demand for money. So, you split the difference. Has the study developed some guidelines that would lead you to change that behavior in the future, or do you still think that splitting the difference is about the best we can do?

MR. AXILROD. Well, we've always known from work we had done before with the model, and this is specifically in this study, that if

you put yourself in a contemporaneous reserve accounting world--if you had forgotten, it's almost impossible with lagged reserve accounting--if you were really aiming for total reserves and total reserves were running, say, \$200 million stronger [than desired], it's not sufficient to lower nonborrowed reserves by \$200 million because borrowing would go up. You'd have to lower nonborrowed reserves by \$400 or \$500 or \$600 million so that the increase in borrowing is less; so if borrowing then goes up \$400 million, you've got your \$200 million effect on total reserves. You have to do a lot more in some technical sense than you were suggesting that we were doing at times last year. All our study suggested to me was that if we want more short-run control, we ought to do more of whatever we were doing last year. Now, that doesn't say how much more. Other evidence would suggest one heck of a lot more to hit that total reserve target. Of course, our other evidence was that you shouldn't bother hitting that total reserve target because it's going to give you more disturbing interest rate variations than are worth whatever good you do for the economy.

MR. ROOS. But reacting more quickly in adjusting the reserve path does not eliminate the desirability, possibly, that while you are doing that you may at the same time want to have the discount rate move more closely [with the market] or more frequently. They are not mutually exclusive, are they?

MR. AXILROD. Oh, no.

MR. STERNLIGHT. They're reinforcing.

MR. AXILROD. That's right; they are reinforcing.

MR. ROOS. So, we could think of [using] both.

MR. STERNLIGHT. But that might give you more of an impact than you want. Both of those could work in the direction of more rate volatility, and that is something to be weighed along with that.

MR. ROOS. That's what you give up--control over rate volatility.

CHAIRMAN VOLCKER. Mr. Winn.

MR. WINN. Mr. Chairman, I would like to join John in complimenting the staff for what I thought were the right procedures of really looking at what we have done and trying to learn some lessons from it. One of the technical developments last fall, particularly, was the development of excess reserves. Did we really ever focus on what happened on that to throw us off in terms of--

MR. AXILROD. Well, it is widespread throughout the member banking system. Very little of it, of course--the way we counted it, it couldn't be very much--is for nonmember banks. It seems to have developed in the first week of November just before they actually had to hold reserves under the new procedures; and it has been sustained and actually was rising on a monthly average basis through January. So, in terms of correlations, it relates to the new Monetary Control Act. Why it just didn't disappear after four or five weeks, we don't

have an answer for because we can't locate it at any particular set of banks; it is pretty generally dispersed.

CHAIRMAN VOLCKER. I suspect that the Federal Reserve Bank Presidents may be in a better position to answer that question than Mr. Axilrod.

MR. WINN. Well, I tried with our banks, and some of them that suddenly have acquired branches or tried to consolidate their holding company operations really got fouled up in their calculations. But we didn't find a heck of a lot in our District; I've tried that. And many of them who denied that they held any excess reserves, when they really got into their figures found that they had them. So, sometimes it's a matter of their not knowing what they're saying.

MR. AXILROD. I really think it's the switchover to the new accounting that is somehow screwing up their own internal bookkeeping procedures.

MR. BLACK. I think that probably is a lot of it.

MR. PARTEE. And that will wear down over time.

MR. AXILROD. Yes, but it should have worn down by now.

MR. PARTEE. Well, we haven't been on it that long.

MR. BOEHNE. Some of our banks are getting into the electronic funds disbursements--the Max or George or whatever--and find that they have to have a lot more cash to handle that, so they end up with excess reserves. They are still trying to adjust their inventories of cash and figure out how much they really need; that's a factor in our area.

MR. BLACK. Yes, but they know that when they go into the reserve period because that's lagged.

MR. BOEHNE. They know that except that they have people dealing with new reduced reserve requirements and a new regime. There are also different cash needs out there in their branching systems because of [these ATMs]. I think the uncertainty just makes them more cautious; that's what we find.

MR. BLACK. Well, rate volatility could be involved, too.

CHAIRMAN VOLCKER. Governor Gramley.

MR. WINN. Paul, could I ask one more question? If we looked at our cyclical experience in the past where the fluctuations were wider than we would have liked, do you think we could have used various types of smoothing techniques, such as subsidiary targets--whether you used credit or nonborrowed reserves or any of those things? Of course, our experience is very short lived. But you do get some smoothing effect from that. On the other hand, that's a [unintelligible], and other problems could arise.

MR. AXILROD. Well, I'm not sure exactly what you mean by smoothing techniques, President Winn.

MR. WINN. To try to eliminate the fluctuations. In addition to using the procedures we had, if we had had a subsidiary target with respect to nonborrowed reserves or credit or any of those things to modify considerably your intervention points--

MR. AXILROD. Well, after the fact, we did try to see what would have happened to GNP if we held the money supply path constant--that is, if one wanted to eliminate the M1 fluctuation. In that work we did that partly through the quarterly model. But an implication of the work Mr. Tinsley did on the monthly money market models was that we would have had a lot more federal funds rate fluctuation. So, we concluded that there was no way, given what was going on in the economy, that we could have smoothed the money supply without desmoothing--if that's a word--the federal funds rate. If you wanted to smooth the federal funds rate, it wasn't absolutely clear that on average you would have gotten more [money] supply fluctuations. There was probably a little more, but that didn't show up as strikingly.

MR. WINN. You get different intervention points.

MR. AXILROD. Well, yes. If you wanted to smooth the funds rate, you would have had rather different intervention points. You would have had a different funds rate limit.

CHAIRMAN VOLCKER. Governor Gramley.

MR. GRAMLEY. First, Mr. Chairman, I'd like to add my compliments to those of Presidents Balles and Winn on the quality of this staff study. I think it is excellent--perhaps the best that I have seen in 25 years of association with the Federal Reserve.

MR. SCHULTZ. My goodness! Better than under previous research directors?

MR. GRAMLEY. A very good study indeed.

MR. PARTEE. Well, I don't know!

MR. AXILROD. Better than the preceding housing study?

MR. PARTEE. That was a good study; nobody ever did anything with it.

MR. GRAMLEY. I have two questions. First, back in the days when policy was run with the federal funds target, staff studies here at the Board indicated that if we switched from a fed funds target to a reserves target, there wasn't really any reason for thinking that we would improve our precision of monetary control. There wasn't anything in the law of economics on how financial markets operate and how financial institutions operate that would improve the precision of monetary control by going to a reserve target. And I take it from this staff study that that conclusion still holds.

MR. AXILROD. In the work that Dave did, using the models, we got about as good a result with the funds target as we did with the nonborrowed reserves target in terms of short-run precision. However, if you assume structural changes in reserve requirements that would eliminate multiplier problems, I think we would get better results

either with [nonborrowed or] total reserves on the Board's monthly model than we do with the funds rate just because of the elimination of that multiplier problem. But, in general, we get roughly the same result with the funds rate as with nonborrowed reserves.

MR. GRAMLEY. Second, I recognize that it certainly would have been difficult, perhaps even impossible, to ascertain whether or not these short-run fluctuations--week-to-week and month-to-month--in long-term rates such as mortgage rates and so on affected adversely the volume of investment. That empirically would have been hard to pin down. But there isn't any real doubt as to the direction of influence, I would think. Wouldn't you expect that to increase the cost of doing business? It would increase the riskiness of investment and, therefore, would tend to have a negative effect.

MR. AXILROD. Well, we certainly would have agreed with that if we could have found convincing evidence that long rates were on average higher because of fluctuations induced in short rates--that is, if the yield curve involved a wider spread of long rates relative to short rates. Of course, the yield curve was downward sloping much of the time, so in that sense the spread was narrower, and we couldn't really find much evidence of that. So, that led us to think that the procedure itself is not a factor making long rates higher than they would otherwise be. There were the fluctuations, and we can't answer the question on that. Monetary policy, of course, in the sense that the money targets did give that constraint [unintelligible], and that isn't exactly what we were investigating. I would agree, of course, that the money target was relatively low, so that did give us higher short and long rates and the constraints from that. But my memory is that we didn't find evidence that the fluctuations endemic to the procedures were making for higher long rates relative to short rates.

MR. GRAMLEY. That's not my point. My point is that at a given level of long-term interest rates, rates are fluctuating more; so an investor cannot know what his cost will be at the time he's going to finance, and that will tend to have an adverse affect. I don't know how big, but it can't be helpful.

MR. AXILROD. We did not find a way, really, of investigating that. I don't think there's evidence for or against that proposition. I would say the evidence does suggest that transactions costs have gone up. So, in some sense, if you go to that point, a new issue is slightly more expensive even though the whole yield curve may not show it. We did find that bid/ask spreads were higher; I don't know who is bearing that [cost] ultimately, whether it's the borrower or the lender. But there was evidence that transactions costs went up.

MR. STERNLIGHT. If I could add a little to that: I don't think I could provide any evidence about what happened to the volume of investment, but there were truly adaptations in the market because of the fluctuations in rates in terms of more variable-rate contracts or floating-rate contracts. Also, there was some tendency by corporations, municipalities, and so on to have shorter-term borrowings.

MR. PARTEE. We had a lot more hedging, too, didn't we, Peter? Didn't we see an increase in the participation in the futures markets by dealers over the last year and a half?

MR. STERNLIGHT. Very much so. How much of that was because of the greater rate volatility or how much was a trend in those futures markets because they were just recently developing would be very hard to untangle.

MR. AXILROD. Well, in the housing market there would seem to be evidence--again it was a continuation of a past trend--of [lenders] trying to put all the risk on the borrower, which tends in effect to raise rates. When rates go down, they don't want to incur the bigger cost of getting out of that higher rate commitment, so they try to [lend] at the higher rate, and that sort of thing. But whether that had to do with our procedure or was just a response to the cyclical volatility of rates and the greater rate of inflation expected and the fears that that induced is somewhat open to question.

MR. PARTEE. I think the rate swings--it was such a big [interest rate] cycle--must have had quite an influence on behavior in real markets.

MR. SCHULTZ. Continuing on this question just a bit more: In the Bluebook I noticed that you assumed that if short-term rates were at current levels a year from now, the mortgage rate would be higher. Why is that? That was the one thing in that family of interest rates that seemed rather interesting to me. All the other rates you assumed would be at about the same level but the mortgage rate was higher.

MR. AXILROD. It's a bit higher; we assumed essentially that the demand for mortgages is still pretty strong given the structure of the--

MR. SCHULTZ. I see. You just repressed demand during the period and it's going to get stronger and stronger. Okay.

CHAIRMAN VOLCKER. You have a very short comment, Mr. Black?

MR. BLACK. Mr. Chairman, I was just going to say that the people with whom I have talked would bear out what Governor Gramley suspects: That these fluctuating rates made it very difficult for them to plan. But I think the key issue, if we are successful in this experiment we began back on October 6, 1979, is whether over the longer run we really would have more fluctuation in long-term rates. My feeling is very definitely that we would have less. But I do think unquestionably that [the greater fluctuation] has affected business planning. Those are my comments.

CHAIRMAN VOLCKER. You have a short comment, Mr. Balles?

MR. BALLEs. Two minutes.

CHAIRMAN VOLCKER. 90 seconds.

MR. BALLEs. Maybe I'd better keep it for after coffee.

CHAIRMAN VOLCKER. We are not going to have any coffee.

MR. BALLEs. I'll try to do it in 90 seconds. It seems to be a tough day here! Some of you have coffee.

MR. SCHULTZ. All animals are equal, but pigs are more equal than others!

MR. BLACK. Some people plan ahead.

CHAIRMAN VOLCKER. What we intend to do is break for lunch at about one o'clock and there will be some food here for the Committee members and the staff.

MR. BALLE. In Steve's summary of the key findings of this study, one of the points he made was that should the Committee desire closer monetary control than we had, let's say, in 1980, one of the prices that will have to be paid for that is greater interest rate volatility. We've been doing some work, which if it continues to hold up under the test of actual experience, would offer a more hopeful outcome. Dave Lindsey referred to the San Francisco money market model; during the lunch break I'll distribute a short 4-page memo that summarizes some of its key findings. I'll just give a thumbnail sketch of it here. Our model in effect provides some evidence that we would not get as much interest rate volatility as conventional money demand models would indicate if we were to aim at closer monetary control. The reason, of course, is that the conventional models all have money demand as being quite interest inelastic and demand for bank reserves the same way. Hence, we have to move interest rates over a wide [range] in order to get some results. What we have done is to plug in the behavior of banks into this model, and bank demand for reserves is based on their own profit-maximizing actions. In seeking to finance their loans in the least costly way they will adjust offering rates on managed liabilities; in their dealings with the public in doing this, transaction deposits are affected. The bottom line is that we find that the demand for money and also the demand for bank reserves is more interest elastic than the conventional models would show.

MR. PARTEE. Inelastic did you say?

MR. BALLE. More interest elastic.

MR. PARTEE. Elastic, yes.

MR. BALLE. The proof of the pudding, of course, is in the eating. And it did happen that in 1980 this money market model incorporating the behavior of banks gave a much better fit in predicting both M-1A and M-1B. The word of warning, of course, is one already given by Steve earlier: That models work in some years and don't work in others. So, it remains to be seen whether the favorable results we got in 1980 will hold up in 1981 and beyond. Secondly, our findings indicate that this special credit control program of 1980 and all the stern talk of Vice Chairman Schultz that went along with it--and maybe because of that stern talk--did have quite an impact on the behavior of bank loans. And, in turn, that goes a long way in explaining these volatile movements of the aggregates.

Well, I think the two most important implications of our staff study are: (1) that closer monetary control, if we are right, would lead to noticeably less interest rate volatility than implied by conventional models; and (2) that many deviations of the monetary aggregates from target, which are usually attributed to a shift in the

money demand function instead can be caused by money supply shocks induced by such factors as volatility in bank loans. The first conclusion suggests that we shouldn't let concerns about unacceptably large interest rate variability prevent us from responding perhaps more aggressively than we did in 1980 to deviations of the aggregates from target. And the second point suggests that we should be less willing to accommodate such deviations because they often reflect money supply shocks and not always money demand shifts. But, as I say, we'll distribute this at lunch time so you can read it and study it. I hope you will find it worth taking a look at.

CHAIRMAN VOLCKER. I think we ought to turn to the policy issues. There are a lot of issues that can't be covered in a study of this sort. Mr. Gramley points out that we get just as good control, according to all these studies, by manipulating the federal funds rate. The operative question may be whether we are willing to manipulate the federal funds rate in that way. I think the main reason we went to another technique is that we probably are not. The other point I would observe is the one that Mr. Balles was just talking about. I don't know about his model, but there seems to be a lot of evidence that there's a pretty good tradeoff here between interest rates and stability in the money supply. Now, Governor Wallich has often made the point that 999 out of 1,000 people--or maybe 999,000 out of a million--are looking at interest rates and not deviations in the money supply when they are concerned about stability or instability. How we approach that problem is an interesting one.

Let me just ask a question to see whether we can dispose of some questions or not: Should we have a debate about going to a different control technique? I don't know how to go to total reserves or even the monetary base under the current institutional setting. But we could do it nominally, anyway. I say I don't know how we can do it in the current institutional setting because we don't control discount window borrowing under any of these proposals in the short run. That is a question to which I will return. But, can the discussion proceed on the basis of working within the framework of an immediate nonborrowed reserve technique with an eye on total reserves, leaving the question of emphasis open? Or do we [want to discuss] going back to federal funds or take another step toward some other kind of aggregate? Is there anybody who wants to argue the case for any of these extremes?

MR. GRAMLEY. I'd like to argue the case for going back to the federal funds target, not because I think the Committee is likely to agree with me or go in that direction but because I think the value of using that technique needs to be kept in mind when we ask ourselves what we are doing with the present technique or how we are going to improve it. First, we have to recognize that the way we communicate our [policy actions] to economic activity today is through movements of interest rates. Interest rates are the cutting edge of policy. We have eliminated almost completely the changes in credit availability that were so important in years past. And I think one could argue that it's unconscionable for the central bank not to be concerned about the cost of credit, the cost of money, when that is what is communicating its effects to the real economy.

Second, I would argue that increasingly over time in recent years we have found that instability of money demand has become a

very, very large problem in an operating technique of this kind. I'm not at all sure that that is going to go away. It may well be a characteristic that's endemic in a system in which there is so much inflation that interest rates get to a point where people are moving assets from one area of the financial markets to another and where financial institutions are innovating to make this possible. We may find that five years from now we have problems every bit as large as we face prospectively in 1981 in trying to interpret what is happening to the narrow money measures.

Third, as I mentioned, I think under present institutional arrangements we can operate to control the growth of money quite as precisely with the federal funds target procedure as we can with reserve targets. Finally, I think it is important that this technique we adopted does indeed communicate a lot more of the variability in interest rates in the short-term end to the long-term end. And, although we can't measure it, it does have some adverse effects on investment proceedings. Even if people could hedge this interest rate risk, they are going to pay to engage in this hedging transaction. Mr. Chairman, I think you are right--and this is what we need to keep in mind--that there really is only one reason why we should have abandoned the federal funds target procedure to go to the reserve target. And that is because if we operate on federal funds, we explicitly take responsibility for what is happening to interest rates and then this becomes a very, very difficult world to live in. But we need to keep that in mind. If that's the reason we are on this new strategy and no other, then we can go about conditioning how we apply the new strategy in ways to take advantage of the economic aspects of operating on a federal funds target.

CHAIRMAN VOLCKER. Let me restate perhaps somewhat differently a couple of points you made. As to your first point regarding our concern about interest rates, I didn't mean to eliminate that in saying we would eliminate the question for consideration. We can do that with either technique. I think you mean that you are interested in the broad movements of interest rates when you make that point, and that remains a relevant consideration whatever technique we use. And it bears upon how hard we press on nonborrowed reserves at a given time.

The money demand shift is a valid technical point. If that indeed is a big problem, the [unintelligible] point has been made. I do think the last point you made is a point of some concern. There may be something in our present technique, merely because of the uncertainty it generates about interest rates when we don't take responsibility for them, that makes the market react more sharply to a short-term change in the federal funds rate, let's say, than it would otherwise react. Now, I don't know what that mechanism is, but one gets a little suspicious when we sit here and communicate no conviction at all about what the short-term rate should be. The long-term market jumps more strongly in either direction than it otherwise would because market participants are trying to figure out themselves where [the short-term rate] is going to go, and father isn't telling them. That may be an important deficiency in the present technique as it is now operated. And it may be the [main one], as I see it. Well, the money demand shift is a technical argument; [the issue is] how important it is, I guess. Mr. Balles was just saying the opposite.

But this last point does bother me a bit. Does anybody else want to comment?

MR. WALLICH. If the procedure has had a defect, in my mind it has been the excessive volatility of interest rates. Given the biases that I have, I've been more concerned about the rapid decline [in rates] in the second quarter of last year than about the way they got up to 20 percent on two occasions. And now that I hear from Mr. Axilrod that apparently the sharp drop in the second quarter didn't have much of an economic repercussion--that the quick revival of the economy was largely the work of the real sector and perhaps the credit control removal, not the drop in interest rates as I had thought--

CHAIRMAN VOLCKER. He didn't quite say that, did he?

MR. AXILROD. No.

CHAIRMAN VOLCKER. He just said there was no special drop in interest rates due to the new control technique.

MR. PARTEE. On variability, day-to-day and week-to-week.

MR. WALLICH. Well, I think the reason rates dropped so sharply clearly was due to the new techniques. And had we stuck by the new techniques firmly and stuck on the path, rates would have dropped a good deal more.

CHAIRMAN VOLCKER. I think you are making an assumption that he didn't make. That may be true in practice, but he is saying if we had moved the federal funds rate as much as would have been indicated, given the decline in the money supply, we would have gotten a similar result.

MR. AXILROD. Well, also more particularly, given the decline in real GNP.

CHAIRMAN VOLCKER. Well, given the decline in the real GNP.

MR. AXILROD. It was not out of line with what normally happens.

CHAIRMAN VOLCKER. We may not in fact have done that under the old technique; but if we had, there wouldn't have been much difference I think is what he said.

MR. WALLICH. Okay. Well, in that case I have to say that, in my opinion, we wouldn't have moved from 20 percent to 10 percent in that quick succession any more than we would have moved up from 12 percent or so to 20 percent. So I think what we need is more observation of interest rates. But I'd be more concerned about sudden drops than about the increases we have had so far. Of course, we could have increases that would worry one. But the way I look at interest rates, as you know, is that they are not really high after taxes.

MR. PARTEE. In real terms.

MR. WALLICH. [Yes]. Now, as a technique improvement, I would say it would be worthwhile to go to a contemporaneous reserve--

CHAIRMAN VOLCKER. Well, let's get to that later and just stay on this other more general subject.

MR. WALLICH. I would say that we should not go back to the old technique of targeting on the funds rate because I've seen us not do enough or not act on a timely enough basis in the past. The technique we have now forces our hand. I would add that we might be well advised to publish our directive immediately under the new procedures, but I guess that's a separate topic also.

CHAIRMAN VOLCKER. Mr. Corrigan.

MR. CORRIGAN. This is partly a question, Steve, if I could. Let's say we stayed where we are now in an operating mode, recognizing the interest rate/money supply variability tradeoff. Could we buy any materially greater amount of stability in interest rates if we significantly widened reserve carry-forwards and permitted carry-forwards of both deficiencies and excesses, maybe even up to 5 percent or something like that, and let financial institutions put a much greater cushion in there to absorb some of these rate effects that we might otherwise get?

MR. AXILROD. We might. I'd have to think it through more carefully. It's sort of like opening the discount window.

MR. CORRIGAN. That's right. It has the same effect.

MR. AXILROD. I suppose it could buy some week-to-week interest rate stability at some cost in terms of the multiplier.

MR. CORRIGAN. That's what is not clear to me. Is there a real cost there?

MR. AXILROD. I'd have to think it through; my instinct is that there might be. But how big I'm not sure.

MR. SCHULTZ. Could it not go either way? Could it not be destabilizing as well as stabilizing?

MR. CORRIGAN. Well, my instinct is--

MR. SCHULTZ. Suppose it all went in one direction in one week. Does it not have the same kind of effects we might--

MR. CORRIGAN. Well, if we did this kind of thing, we'd have to have it work both ways. There would have to be some kind of penalty; it wouldn't be a freebie.

CHAIRMAN VOLCKER. I wonder whether we can try to stay on the more general questioning and comments on the broad approach. I think this comes under a modification of existing techniques. Mr. Roos.

MR. ROOS. Do you mean just on whether to go back to interest rate stabilization or--

CHAIRMAN VOLCKER. --or go to something else, like the reserve base or something.

MR. ROOS. I think there are several fundamental things that we ought to consider in charting our course. First of all, it's important that we recognize that we have to do something that will be convincing, not just to those of us sitting in this room but to the broader body politic in the world in which we live. I will start from a conviction that, right or wrong, most people who have observed what has happened since October 1979 are far from convinced that it was as much of a success or as satisfactory as maybe some of us would like to think. There is a certain degree of disillusionment that we didn't achieve as effective control of money and credit as we announced in 1979 we were going to seek. Under the present political conditions we face, to try to explain away in a convincing manner whatever shortcomings last year had is almost impossible to achieve.

Secondly, I think it follows that to say we will continue as we did in 1980 but will do the job a little better, without announcing or without agreeing upon certain changes from that procedure, will be less than convincing to the people who are watching us. Politically, if you want to put it that way, and without acting irresponsibly, I think we have to say that we are going to make some changes. The world knows that we have conducted this study. The world, or at least those who are interested in what we are doing, is going to be anxious to see the results of this study and what we do about it. So, I don't think we can get away with either trying to say that 1980 was an unqualified success or that we drew a poor card because of certain extraneous factors. And I don't think we can get away with just saying we are going to do what we did and do it better.

Ideally, Mr. Chairman, if we could press a button, I would say that we should announce that we are going to move the discount rate to a penalty rate more frequently in order to avoid the problems that we had in that regard last year. Ideally, we should seek contemporaneous reserve accounting. I think we should announce--and this may require longer-run action--that we will seek greater uniformity of reserve requirements. I think we have to bite that bullet; we have to say that we will do that in order to achieve steadier control of credit and money. I think we are going to have to say openly that we will permit interest rates to fluctuate more freely. We can't have it both ways. And I happen to believe that if we explain [what we are doing] as effectively as you did yesterday on ABC--and I would compliment you, sir, because I thought you were superb on that program--that we have the ability to tell people what we are going to do. If we told people that we were going to do this, I believe we would have less volatility in interest rates than some people might think.

Short of achieving these ideals, I think it's absolutely essential as a bare minimum that we change our procedures and move the discount rate more frequently to a penalty rate and also that we restore contemporaneous reserve accounting. We have people out there who are aware of these issues. People in the Administration--the Stockmans and the Sprinkels--are going to watch us like a hawk, and we're not going to be able to bluff our way through this. I think we have to show that we are doing something, and try something new. It would be a tragedy for the Federal Reserve to move back to interest

rate stabilization, even though it might be theoretically desirable; it will not fly in the political climate in which we're living. That's my point of view, Mr. Chairman, in a nutshell.

CHAIRMAN VOLCKER. Well, we'll get to these more detailed suggestions. On the general point are there any other comments? Governor Partee and Mr. Morris next.

MR. PARTEE. I would stay with our present arrangement. I come from where Lyle comes from, really. I would like to be able to control the mechanism by specifying the funds rate. And I think we could; but the trouble is we won't. We won't because we won't change the funds rate as much as it ought to be changed. There is an interesting piece of work done by Peter Tinsley which says in effect, if I understand it correctly, that in getting toward our targets if we change the funds rate 3 percentage points at the beginning of the period, we get about as much result as changing it 6 percent over the whole period. Well, that's fine, except who today is going to say: "We are running a little low on the aggregates so let's drop the funds rate 3 points today." Nobody will ever say that. And that's the whole trouble with it; we just don't move it enough. If it weren't for that, I would prefer the funds rate because there is a fuzziness to this other approach in the multiplier and in the changes of the nonborrowed targets and so forth that bothers me. Of necessity we have to put more of this onto the staff than it is good for this body as a policymaking body to do; and it's because of the fuzziness and the intricacy of the arrangements we have. But I would stay with it because I don't think there's anything better.

As I believe Steve suggested in the summary report, given our experience of the last year, I would opt to be freer to change the nonborrowed path in order to offset what is happening in borrowed reserves more than we have done. That's because I rather agree with Larry that people just can't quite understand why the aggregates were so much more volatile in the year after we changed to this experiment that was to stabilize them than they were in the year before. I think that is a practical problem we have and, indeed, it probably has contributed to some of the economic instability. I wouldn't agree with Henry who seems to say let's keep interest rates high or with others who say let's keep them low. I wouldn't talk about an interest rate target in a longer-run sense, because what we do then is just substitute our own predilection for what the market is trying to tell us. I think that in a longer-range sense we have to have [some] volatility in interest rates; they've got to go high and they've got to go low, and they have to do it in response to changes that we see developing in the economy and in the performance of the aggregates. And when we are all done with it one might say--I'm sure most people around this table would say--it's too bad rates dropped that far last summer. But last summer we didn't know what we now know. And that's always the difficulty. Some might say it's too bad that they have gone as high as they have now. But we don't know. Maybe it's just right that they have gone as high as they are now. So, I would say that we should try to be objective and not substitute our judgmental predilections as to what the statistics are telling us.

CHAIRMAN VOLCKER. Mr. Morris. Any other suggestions on the present technique are in the next agenda item, not this one.

MR. MORRIS. Well, I come out about the same way Chuck did except that I don't have any nostalgia for going back to controlling the federal funds rate. I sat around this table for eleven years watching us always moving too little and too late. And even though 1980 was not a model year of any kind, it seems to me that it was inherently a year in which any approach to monetary policy was going to run into serious problems. If you tell me that we are going to have a year in which we have a one-quarter recession where the economy is declining at a 10 percent real rate, I can tell you that there is just no way we are going to avoid interest rate volatility. So, I view the past year as a success story only because I think it was a success relative to what would have happened if we had stayed with the old procedure.

CHAIRMAN VOLCKER. Mr. Black.

MR. BLACK. Mr. Chairman, I think conceptually we can control the rate of growth in the aggregates with either a federal funds handle or with a reserve handle of some sort. However, it's not only the unwillingness to move the federal funds rate that makes it an impractical way of doing it, but also that we don't know how much we ought to move it. The federal funds rate that is compatible with some reasonable rate of growth in the monetary aggregates somehow defined is not a single level; it's a pattern of rates over time. And I just despair of ever knowing that, so I think we ought to stick with more or less our same procedures. I would like to suggest at the appropriate time a couple of modifications that I think would improve the procedures. The problem with the [funds rate] to me is that we don't know how high or how low it ought to be at any time; and I know nothing in past experience, either empirically or in theory, that would give any basis for selecting that level.

CHAIRMAN VOLCKER. I'm not sure we know how high or how low nonborrowed reserves should be; that's the problem.

MR. BLACK. Well, I'm going to take care of that in the next exercise!

CHAIRMAN VOLCKER. Mr. Balles.

MR. BALLES. I essentially agree with Chuck Partee on the reasons for staying with nonborrowed reserves as the operating target. In practice we simply didn't or weren't willing to move the funds rate around. The additional comments made on that same subject by Frank Morris and Bob Black I find myself in agreement with, too.

CHAIRMAN VOLCKER. Anybody else have any comments? Bob Mayo.

MR. MAYO. I would just add briefly that I took great comfort in Steve's analysis. I think all of us agree that even 15 months is a terribly short period; nevertheless, Steve told me not that this had been a great success, using Frank Morris' word, but that it was not a failure. And I think we owe it to ourselves to pursue it further with whatever refinements we can do.

MS. TEETERS. I agree in that the lesson I got from the past 12 months is that we couldn't pick up judgmentally when the rate should go up or go down. There's a distinct advantage to this and, in

contrast to Henry, I think they should go down as well as up. But it has to be an equally up and down elevator. I think the main point that comes out of a great deal of this is that we really shouldn't try to control the money supply on a rigid growth rate basis. We should aim for it, but the forces in the real economy are going to swing that money growth rate around and we should be prepared for it and try to interpret the misses that we make as a reflection on our projections and what is going on in the real economy. To try to make money grow at an absolutely steady rate in a fluctuating real economy will create such horrendous fluctuations in interest rates that it will defeat what we're doing. Also, as Lyle says, we have to keep an eye on the general level. We can get rates so high that they choke off economic activity, and that's not really what we're aiming for. So, I would stick with the procedure, but I would put in perhaps a more fluctuating target in terms of where we want the money supply to go in light of what we know is going on in the real world.

CHAIRMAN VOLCKER. If no one else has any comments, I will declare it the consensus that we will work in the general framework of our existing techniques. We will now discuss modifying them. I do think there is basically a tradeoff here, if nothing else, of the desirability of escaping responsibility for discretely moving interest rates. A number of people have said that in ten years of experience we didn't move very far because we don't like to do that. But [our new procedure] has exacted a price in terms of generating more instability throughout the interest rate structure, which may pass. If you want to be an optimist, you say that people will learn enough through the experience, and long-term rates will no longer fluctuate so much. But they certainly fluctuated in disturbing proportion to the fluctuation in short-term rates in the past 15 months. Now, we've only been through two, or not even 1-1/2, interest rate cycles, I guess, so people haven't had much chance to learn from that. Maybe as they get through another one or two, these reactions will be less. Let's hope so.

Let me turn now to modification of the technique, which has obviously already been touched upon in a number of comments. I'm inclined to reverse [the order]. Well, let's not reverse it; they're somewhat inter-related, I guess. Let's just discuss both together: the speed of the nonborrowed reserve adjustment--another way of saying the speed of the total borrowing adjustment--and the handling of the discount window or the discount rate. The latter has already been touched upon on a number of occasions. I think there is a difference between moving the discount rate more frequently and moving it automatically. I continue to be of the belief, and I have heard nothing to dissuade me, that if we are operating on the present technique and tie the discount rate to market rates--whether you call it a penalty rate or whatever you call it--we would have an explosive short-term situation either up or down that I find impossible even to contemplate. The present situation is awkward and is imposed upon us partly, but not entirely, by lagged reserve accounting. When things are tight we don't have a penalty rate and we can't have a penalty rate, and it looks as if we're subsidizing the banks to some extent. If I could minimize that appearance and reality, to the extent it's a reality, I'd be very pleased. I don't know how to do it. We tried to fool around with the surcharge, but those are the kinds of problems I see. That does not mean we cannot move the discount rate more

frequently. But then as a matter of judgment, I think we also--and it may be good or bad--are going to get more instability in market rates.

VICE CHAIRMAN SOLOMON. One thing that hasn't been studied by the staff--and maybe it's worth studying in answer to the specific point that you just made--is how to avoid as big a component of subsidy and the criticisms, which may mount further as we get into the thrift institutions discount window situation. It seems to me that we might consider having a surcharge--a frequency surcharge as we do now, although the timing could change--but that the size of the surcharge should be equal to the difference between the basic discount rate and, let's say, the average of the 3-month CD rate over the previous four weeks. We wouldn't get as big a ratcheting effect from that and banks that come in too frequently would have their subsidy eliminated. I think that might be worth some study.

MR. RICE. Good point.

MR. SCHULTZ. I agree. It's certainly worth study.

CHAIRMAN VOLCKER. I don't know how you get rid of the ratcheting effect but that--

VICE CHAIRMAN SOLOMON. I think you reduce it.

CHAIRMAN VOLCKER. Well, it depends. You reduce it to the extent you open up the time between now and when they actually have to pay the penalty. But you have a pretty high--

MR. FORD. Paul, I'm not sure. You've made this point a number of times about the mechanical connection between the way the [window] works and the rest of the procedure, but given the complexities of the dynamics that Chuck was hinting at, I'm not sure it's that simple. It could blow up in our face; I'm not saying I swear I know that it wouldn't--

CHAIRMAN VOLCKER. Well, it wouldn't blow up indefinitely. If you get rates high enough so that the money supply adjustment is forced, it then goes down the other way.

MR. PARTEE. Yes, you overshoot; that's the trouble.

MR. FORD. Well, whether or not you do, that's why I'm interested in what Mr. Balles was suggesting: That more and more people are saying that this is not so automatically volatile; that there is some kind of damping mechanism that may come into play to save us. Granted, it's a policy risk to test it, given the uncertainty of the theoretical dynamics of it. On the side of arguing for trying it, a couple of things have popped up that really bother me about the way we operate the discount window. One is the subsidy. It has been mentioned that it's perceived that we are giving away money to the banks. Another thing about it is the difference between the way we operate our window and the [way the Home Loan Banks lend to the] thrifts. We're all aware that Congressman St Germain is conducting a hearing the thrust of which, as I read it, is to say: "Hey, let's allow the thrifts to come in and borrow and forget about this [problem of] exhausting their other [sources of funds]." In that connection, we've been looking at how they operate at the NCUA and how

the Home Loan Banks operate their windows. I'm sure you know that they operate their windows basically by offering their members a variety of loan options based on maturity, more or less keyed to the yield curve that they have to deal with when they go out to raise money to fund the loans. I'm not saying that that's ideal for us, but the fact is that as we interact, if we allow the difference between what it costs to borrow at the Fed window to be vastly different than, say, at the Home Loan Bank window, sooner or later we're going to have to face the political realities and the heat that Congressman St Germain is generating.

CHAIRMAN VOLCKER. Look, we have all these problems; the question is how to avoid them.

MR. FORD. Well, the obvious thrust is to move toward their system of going more toward--

CHAIRMAN VOLCKER. They're not creating reserves when they are lending. We just agreed to stay on this technique and I'm assuming the current institutional setting involving a reluctance to borrow at the discount window [is not changed]. [As for] forcing the banks in the aggregate to borrow, I'm just telling you the opposite of what you tell me. A bank is not going to borrow [from the window] unless the market rate is above the discount rate. So, when we force the banking system as a whole to borrow, we can't keep the market rate below the discount rate because they won't individually borrow to come up to the total we're forcing them to borrow. It's just as night follows day in the short run with this technique, and we can't escape it. Now, we can change other institutional settings, but there's no use sitting here saying we're going to force the banks to borrow and we're going to move the discount rate above the market rate. If anything isn't possible, that's it.

MR. FORD. No, it has to be accompanied by modifications of this technique that we use here; you're right.

CHAIRMAN VOLCKER. Now, you can go to the other extreme and say we don't care about banks borrowing. We just open up the discount window to anybody who borrows and then the discount rate will become a ceiling. And we can have a penalty rate and all the rest; but we've got to make all the other consequent changes in our present technique.

MR. PARTEE. It's tantamount to getting back to setting the funds rate.

CHAIRMAN VOLCKER. Right. Doing that has precisely the same economic effect as getting back to controlling the federal funds rate. But now it is being done through the discount window instead of through open market operations. That is, it's just going full circle and going back to where we started. Now, I'm stuck here because if we force them to borrow, there's just not going to be a penalty rate. If there's not a penalty rate, it looks as if we're subsidizing them. That's my [dilemma]; you tell me how to get out of that box.

MR. MORRIS. I think what we have to do is go toward some rationing system. Given that we need to have the banks borrow X amount of reserves, the second problem is: Which banks are going to be borrowing X amount of reserves? And it seems to me a rationing

system, which we open to the thrifts as well as the commercial banks, could be designed to feed in that level of reserves; at least we know week-after-week that it wouldn't be the same banks that would be demanding that--

MR. SCHULTZ. I suggested [basing] it on a capital ratio.

CHAIRMAN VOLCKER. Well, in general terms, the stricter we are in lending through the window, presumably the lower the level is that we would need to adjust the nonborrowing path to facilitate this. But if we go in that direction, we would get less borrowing. In that sense, we would have less subsidy. But the market rate then presumably would be even higher depending upon what formula we use relative to the discount rate. But [the window] would be used much less frequently; it wouldn't make much difference. That is one way we can go.

MR. CORRIGAN. Doesn't it follow from what Steve was saying before that we also get that result if we take the position that we're only going to use the discount window for real emergencies?

CHAIRMAN VOLCKER. Well, that's the extreme of that policy.

MR. MORRIS. But that's not really a policy that we can live with.

CHAIRMAN VOLCKER. No.

MR. GRAMLEY. The one thing to keep in mind about any significant change in the administration of the discount window or the arrangements by which banks and other institutions can come to borrow is that if we want more monetary control precision, we're much better off to stay where we are than to introduce a system that is going to take six months to a year to figure out.

CHAIRMAN VOLCKER. There are a lot of traditions surrounding the discount window; it has been more or less the same for decades and decades. When you change something like that, you get a big educational problem in the short run. And then if we decide we don't like it after we change it, we've got a heck of a problem going into something different I think. These are the constraints that have left us where we are now. That doesn't say we're in a perfect position, but it's very hard, I think, to change this in a fundamental way.

MR. BALLE. Paul, I'd agree certainly with your conclusion that, especially given lagged reserve requirements, there's no practical way to get to a penalty rate. But having agreed with that, I'm not at all certain that we--

CHAIRMAN VOLCKER. Let me just put in as a footnote that, of course, this only happens when borrowings are high. When the money supply is running low and borrowings are low, you'll get a penalty rate.

MR. BALLE. But having agreed with that, I'm not convinced, as yet at least, that we need to have as big a gap as we see presently or have seen in recent months between the discount rate and the funds rate. Maybe, especially with the benefit of hindsight, we ought to

dwell on whether it would have been feasible to close the gap somewhat. I think that's a rather practical question because as we look back on 1980, in a technical sense, most of the misses on the aggregates came from overshoots or undershoots of borrowings that were not quickly or fully offset in the nonborrowed reserve path. To some extent a more active discount rate policy of keeping at least closer in touch with the market might have headed off some of that. I raise that as a question rather than a conclusion.

MS. TEETERS. The last two times we raised the discount rate, it went right through to the market rates. It didn't close the gap at all. The moves were undertaken with the idea of trying to close the gap and the gap just moved ahead of us.

MR. PARTEE. And the gap has been widest in the last eight weeks, John, when we've had shortfalls in the aggregates.

VICE CHAIRMAN SOLOMON. I think this discussion could be seen a little more systematically if we look first at what modifications [we could make] in the way we set the initial borrowing requirement, what modifications [to make] to the nonborrowed reserve path, and then see what residual kind of change, if any, is needed in the operation of the discount window. The point you made is quite relevant. We know that there is a tradition here and it disconcerts people if we keep changing things very frequently. We achieve some of the same effect through the first two alternatives. It would seem to me that we might give more weight in setting the initial borrowing requirement to what level of borrowing is needed or, in other words, what level of nonborrowed reserve path is needed to achieve the intermediate target and less emphasis to smoothing the post-meeting funds rate. I've been as guilty as anybody else, or maybe more so. And if we are going to try to come closer to the path, then maybe we can't afford the luxury of that kind of smoothing emphasis in setting the initial borrowing requirement. I think that's worth talking about anyway.

CHAIRMAN VOLCKER. Well, it's clearly a kind of tradeoff. But if you're suggesting going in the direction of more rapid reductions when we're overshooting in the nonborrowed path, we're going to get more borrowings in the very short run anyway and it's going to increase the discrepancy between the market rate and the discount rate, if that's important to you. Now, this discussion already took place in part. We could also raise the discount rate more rapidly; in the very short run it's probably not going to narrow that discrepancy between the discount rate and market rates very much, but we would have taken two actions to get the money supply back on course more quickly at the expense of more interest rate volatility and not done much with this appearance of subsidy. But that doesn't end up saying it's wrong because--

VICE CHAIRMAN SOLOMON. I understand the implications of it. But I find myself in a very curious situation in that I happen to agree with Larry Roos that in the broader sense of the term the politics require some demonstration of a further improvement in the procedure. Unfortunately, the only further improvement I can think of is trying to track the money supply more closely even though it probably means more interest rate volatility. I don't have the bottom line magical, mystical, faith that some people do that when we get this money supply tracking very closely, for some reason interest rate

volatility is going to be reduced. But even though I don't have that, I don't see any other way to go; the whole [prospect] of improvement seems to me to lie in that direction. We can't make a partial regression toward more emphasis on the fed funds rate without looking foolish. So, even though I don't like the bottom line, the dynamics of the situation are taking us in that direction. Similarly, along with a more realistic initial borrowing requirement, I also would support the implied recommendation--maybe it's implicit enough in Steve's summary paper--that the nonborrowed reserve path be adjusted more promptly and more sharply. Right now I don't know how to handle it. Do we leave this entirely to the discretion of Steve and Peter, checking with the Chairman? Or are there some parameters or some guidelines--it's very hard to conceive what they would be--that the FOMC would want to give to the Desk and the staff on the size of the adjustment of the nonborrowed reserve path? It seems to me that these are the areas we ought to try to reach a consensus on first and then see what's left.

CHAIRMAN VOLCKER. Well, they're very much interrelated. And we could do the opposite. We can do what you're suggesting in the nonborrowed reserves--[by moving] the borrowings more rapidly either at a meeting or between meetings depending upon what happens--without changing the discount rate or even the discount window administration. That's an interesting question. Would we conceivably get more impact on the money supply per basis point of interest rate change because we put the banks into debt, which worries them and forces adjustments in banks that may not be fully reflected in interest rate movements in the market because of nonprice considerations?

MR. BOEHNE. This idea that was brought up about the politics of the situation requiring some improvement in procedure seems to me very much a Catch-22 idea. I think we have created expectations that are beyond what we can basically deliver in terms of the precision of hitting money supply targets, given this idea that aiming for zero is [as likely to result] in +10 as -10. If we refine [our procedures] further, which I think we ought to do, then we just heighten those expectations even more. It seems to me that we're always in that kind of jam. Therefore, I would not make changes because we think doing so is going to improve the political situation. Whatever refinement we make, [what we can deliver] is still going to be far from the expectations that have been created.

CHAIRMAN VOLCKER. Well, it would be a mistake to make changes for the sake of making changes. We ought to make changes for the sake of perhaps doing a better job. Almost any change we make may suffer from the defect that people will read more into it than it's really worth. But it's a little dangerous to make a change because somebody wants us to make a change and then the change doesn't produce the result that's intended.

MR. ROOS. Paul, I'd like to follow up on your analysis and Tony's and ask Peter and Steve a question. What were the factors that led to not adjusting the nonborrowed reserve path more quickly last year? In other words, was it a conscious policy that caused you not to move as quickly as you might move this year under this new point of view or was it a concern about the effect on interest rates? And if the latter was the case, wouldn't you still have that concern in the back of your head starting next Monday?

MR. STERNLIGHT. We had a rule of thumb, as Steve has mentioned--I don't know how religiously we followed it--that we would move the nonborrowed path by about half of the undershoot or overshoot. But that was conditioned at times by other factors. When the Committee indicated in the adoption of its objectives that, say, the objective was 4 percent but it wouldn't mind if that were a little faster or a little slower because of where we were coming out vis-a-vis the annual targets at that point, that was the conditioning factor in whether we pressed for more or less adjustment.

MR. ROOS. If, in order to eliminate the problems we had last year, this Committee made a broad request of you to move it a little more quickly than you did last year, what would that mean in terms of what you would do starting next week?

MR. STERNLIGHT. Well, I'd have to work that out with my colleague, Mr. Axilrod. In my own view, there is room for more of that kind of adjustment. Certainly one can look at some periods last year, like the August-September period, and say that we surely should have moved the path more. I think one can come to a different conclusion about last spring when the adjustments were on the other side. Some regular upward adjustments of the nonborrowed path might have helped us restore [monetary] growth more rapidly, but that could have sent us into even stronger growth by the third quarter and perhaps would have been unwise in retrospect. So, it's not clear that on all occasions more rapid adjustment would have been the answer.

CHAIRMAN VOLCKER. I suspect that during a good part of last year we were influenced by projections of the money supply, which we've now learned were totally unreliable. Each month during that autumn period all the projections said it was going to level off this month.

MR. AXILROD. Another factor to consider with respect to the spring is that we were literally stopped from raising the nonborrowed reserve path. Total reserves were weak because there was no borrowing; and if we had created a substantial amount of excess reserves, the funds rate would have gone close to zero. So, in some sense the lower limit of the funds rate range was a stopper there. The Committee, of course, gradually lowered that limit, but that was an effective stopper. And when you're lowering the nonborrowed [path], one of the advantages of lowering it in a sense, is that often it will require a Committee meeting. That's because to lower [the nonborrowed path] means we're probably going to hit the upper limit of the funds rate range, and it might mean we'll get there faster and that will require a Committee meeting to get beyond it.

MR. ROOS. But you still had hovering in your mind a concern about the effect on the fed funds rate, right? I thought I just understood that.

MR. STERNLIGHT. I think we had an awareness [of that effect] but I don't think that necessarily stopped us from adjusting--

MR. AXILROD. It's only a stopper in a sense when we hit the upper limits or the lower limits. Then you'd have to have a Committee meeting.

MR. PARTEE. May I make a comment, Paul, just on this question? I agree with the idea that we need to adjust the nonborrowed [path]. It may be that it's not so much the size of the initial adjustment that we make in response to an overshoot, particularly, or perhaps an undershoot, but rather that there ought to be some concept of scheduling more and more adjustments as the duration [of the miss] extends. That is, you might start with adjusting the path for half [of the deviation], but then if it persists for a second week you might take another bite out of it and in the third week you might take still another bite. It's a way to get a time factor into it. Now, we'd have to fool a lot with the numbers to figure out what kind of decision rule we might have, but that seems to me a possible way to go that I'd like to see explored. In any event, when we do this, the chances are that borrowing is going to be bigger than it was before because there will be some lag time before the market begins to adjust; so as we do this, we'll have more borrowings. I agree with you that we have to have a spread; and I agree with Nancy that we've certainly seen, when conditions were tight at least, that every time we changed the discount rate the spread re-established itself by the funds rate going up as much [as the discount rate] and sometimes a little more. That does create the perception of subsidizing the [borrowing] institutions, and I guess there's no way of avoiding that level of borrowing and that differential in rates. So the question really ought to be: Who ought to get the subsidy? I guess if I were a thrift, I would say that I have never been permitted to get the subsidy; only the member banks have. My observation is that it's the big member banks that get it and, therefore, I think that leads one to some kind of rationing system that gives the public perception of a high rate out there for somebody or other. And that does make it possible to spread the subsidy around. Perhaps the price of that will be a bigger differential than now exists because of the inefficiency of the market in having smaller institutions see their opportunity. So, I like Tony's suggestion or some variant of Tony's suggestion as a way of spreading the subsidy around.

MR. FORD. Isn't it the truth--as opposed to the perception in the market that the subsidy goes to big banks--that the subsidy goes to the little banks? It seems to me [true] by definition, with the surcharge.

MR. PARTEE. Well, take a look at January and let's find [out in] February and we'll see who has been borrowing and how many pay the surcharge.

MR. FORD. But the fact is that the size of the subsidy the bank gets depends on whether or not they pay the surcharge; and the smaller the surcharge, the more the subsidy.

MR. PARTEE. True.

MR. FORD. The other element is that while this discussion is leading us toward credit rationing of some sort at the window, we're reacting to a public perception which is technically not the truth--which is that the subsidy goes to the big banks. There is a subsidy for all the banks but the biggest; the subsidy is for the ones under \$500 million, item 1. The second thing is the way we administer the window. If I understand it, in doing the rationing now, which we may

want to change as you say, in some sense liability managed institutions should not get in. Maybe I'm making this too strong--

MR. PARTEE. That doesn't exactly work out that--

MR. FORD. But you are sort of saying we should not have to be aware of what they are doing to qualify. And we all have heard the horror story about the guy who comes in and admits that he's managing his liabilities, seeking to maximize his subsidy, and he's the one we throw out. It's that kind of thing that I see as being--

MR. PARTEE. Well, Bill, when I said rationing, I didn't necessarily mean a rate control system that would be based on administration. I think we can ration by having a more elaborate price schedule. The price schedule might be associated with duration and there might be more than just one surcharge. There might be rules of the game. We could do what Fred suggests, except that would mean technically that the institution whose surplus is dropping to zero will pay the highest amount of borrowing so that--

MR. SCHULTZ. We'd have to differentiate between emergency and adjustment borrowing.

CHAIRMAN VOLCKER. The most effective thing we can do to affect bank behavior is to kick them out of the discount window on an individual basis; otherwise they just don't give a damn. They'll go on making all the loans they want to make.

MR. PARTEE. But at any rate, we could have a price schedule. It doesn't have to be--

MR. FORD. One thing I think I see--but I don't have any research to prove it--is that the multibank holding companies seem to send in their subsidiaries, many of which qualify for the biggest subsidy of all, on a rotating basis. As a banker, from a profit maximizing standpoint, that's the ideal thing to do if you're worried about your shareholders' interests. That's another aspect to [discount window] administration: these different games that people are definitely playing with us at the window. That frustrates me so much about the present system that it leads me to question whether we don't have to modify this procedure significantly in order to get away from these games. The alternative is some form of rationing at the window that at least is more honest than the present one.

MR. PARTEE. By the way, if they send bank A in to borrow, how do they get those reserves distributed around their holding company system?

MR. FORD. They can move anything they want. They can make the loans or the deposits show up wherever they want.

MR. PARTEE. So, they may do it through the loan portfolio. If they do it by interbank lending, [the Reserve Bank] is supposed to tell them they have violated our rules.

MR. FORD. Yes, but try to track that in reality when you're talking about banks that have 30 or 40 subsidiaries and geniuses to

manage their balance sheets, which we don't. We couldn't keep up with that, could we?

MR. SCHULTZ. You have heard about fungibility, haven't you?

CHAIRMAN VOLCKER. The conflict I see here, again, is that the way to handle the perception and the reality of the subsidy in the administration [of the window] is to make it easier to borrow with no upper limit. If we make it easy enough, the subsidy will go away. But that works against the short-term control of reserves and the money supply. The more we work in the direction of short-term control of the money supply, the more the discrepancy will appear. And I don't know how to get out of this box.

MR. FORD. It's a Catch-22.

MR. PARTEE. We might as well accept it.

VICE CHAIRMAN SOLOMON. I think, though, that we can reduce to some degree the size of the box, or the criticism that comes from being in the box, if we move to some arrangement whereby the bank that comes in the second or third time in too short a timeframe has to pay the--

CHAIRMAN VOLCKER. Well, of course that is precisely what we did with the surcharge. I guess we have some question whether the surcharge doesn't become in market practice the effective rate, so it just moves above the surcharge and makes it look even worse against the basic rate. What would happen if we moved the basic rate to 16 percent now? I don't know whether that would have a market impact or not apart from the psychological one. What do you say?

MR. AXILROD. Yes, it would have a market effect. Well, very few banks are borrowing at the surcharge now.

MR. MORRIS. Well, the fact that they're not paying the surcharge means that the rationing can work because there's this reluctance to take the surcharge even though the surcharge rate is still way below the fed funds rate. So, I think we have this new problem in that I at least don't believe that we're going to be able to have for long a different lending standard for the thrifts than we do for the commercial banks. And, therefore, I think we've got to give high priority to figuring out how to go about rationing on a different basis than we customarily have at the discount window.

VICE CHAIRMAN SOLOMON. I've been thinking that probably the best rate for an extended credit program for the thrifts would be the 3-month CD rate so that they get some earnings support but they're still paying a market rate. If we move on the adjustment credit program to having a surcharge that was a lagged average of the 3-month CD rate, then we would also have something that seemed to make more sense for the rate on the extended credit programs. It seems a little more rational, anyway, and less arbitrary.

MR. FORD. Doesn't that get right into the same thing that Paul was talking about: the logic of the system? Because, in effect, that's partially moving to trying to peg the rate to the market to the extent that those borrowings are a significant portion of the whole

amount of borrowing. Once again it is attempting to go to a market determined rate at the discount window and then we're back into the box that Paul was talking about; we're trapped if we buy the current system of control.

VICE CHAIRMAN SOLOMON. I was talking there about the extended--

MR. MORRIS. But you're not, if there's a reluctance on the part of the bank to borrow at the higher rate, which I think will be the case.

MR. PARTEE. But, Tony, if we're going to hold to the idea of a basic discount rate of, say, around 13 percent [as it was] through the whole fall and the CD rate runs up to 21 percent, as it did, and we tie the extended rate to 21 percent, we're not going to be able to get away with that. When the institution--say, one of your savings banks in New York--borrows because it is in such difficult circumstances and we say we will lend to them at one point under the CD rate and that's 20 percent and the basic discount rate out there is 13 percent, they're going to cry bloody murder.

MR. FORD. I'll take 90--

MR. PARTEE. If we have some way of showing them that some frequent borrowers are paying 20 percent also--

CHAIRMAN VOLCKER. We're not going to solve all the problems of the discount window and discount rate at this particular forum. We have to go to eat in a second, but the other two questions that just occurred to me in terms of techniques--there may be others--are the management and the handling of these interest rate bands that we have and, finally, as a number of people have mentioned, the issue of contemporaneous reserve accounting. Are there other issues that should be surfaced here?

MR. CORRIGAN. I think the excess and deficiency carry-forwards are worth thinking about. It does seem to me that having some kind of an arrangement where we provide more flexibility there with a penalty on deficiencies and a penalty in reverse on excesses--

CHAIRMAN VOLCKER. I don't think we're going to be able to handle that one today. That may be something we can look at in the future. I gather there is some sense--I'm not quite sure what it means because it runs counter to the concern about the discount window--about what would amount to forcing the banks more rapidly into more debt when the money supply is excessive. I think there are advantages in that approach. It's going to bring more instability in the very short run; it might help in the long run.

MR. BOEHNE. What about this 50-50 rule about getting back on the reserve path? Chuck made the point that there is a lot of delegation to the staff. This seems to me to be one area where the Committee might be able to make it more than 50-50 or less than 50-50 percent on--

MR. PARTEE. Or have it scheduled.

CHAIRMAN VOLCKER.. Well, that's all in that general framework there.

VICE CHAIRMAN SOLOMON. There is one additional thing that is proposed legitimately and that's the question of whether, in the operating procedure, the reserve path should be adjusted if M2 is growing significantly out of line. At one FOMC meeting we did suggest that the Desk place more emphasis [on M2] but in practice that is not really factored in to the way the reserve path is drawn.

MR. SCHULTZ. We did the same thing with bank credit, too, early last year. That was certainly part of the thinking.

CHAIRMAN VOLCKER. Well, I think these are--

VICE CHAIRMAN SOLOMON. There are two ways of doing it. One is to give 50 percent weight to M1 and 50 percent weight to M2, which in effect means that we're giving a much smaller weight to the nonreserveable deposit components of M2. But it's a clear arithmetical way. Another way is simply to instruct the Desk that when M2 growth rates are deviating, a qualitative [adjustment] is [to be] made in the reserve path, leaving it to their judgment how much, but indicating that we do want a correction in the reserve path.

CHAIRMAN VOLCKER. Well, this is a relevant question, particularly right now when we don't know what M1 is. But let's return to this subject unless somebody else wants to put something on the agenda.

MR. GRAMLEY. I want to reformulate one of these [questions], if I may. On the question of whether we should make an adjustment to the nonborrowed reserve path in a different way than we've done before, I think that could be addressed most fruitfully by saying: What sorts of responses should we try to incorporate into the operating procedures that push the money supply back toward the target level when it drifts off? I say it this way because I think one can conceive of this as being done in two different ways. One is to adjust the nonborrowed reserves between meetings more; and the other is to have the Committee focus on where we are at each meeting and where we want to be. And the latter will give us greater Committee involvement, I think.

CHAIRMAN VOLCKER. Well, there's a general question of whether we want to be systematic at all. If we're off course in [hitting] a target by plus or minus 10 percent, how fast can we get back, apart from the technique of how we get back there.

MR. GRAMLEY. We can address this in 1 or 2 percent--

MR. WALLICH. Paul, could I suggest a topic--probably not a very popular one? I suggest we consider whether we want to publish the directive immediately.

VICE CHAIRMAN SOLOMON. What's the argument for that, Henry?

MR. WALLICH. I'm very much impressed by the continual criticism in the press and the market that we have changed our policy. They say the Fed has eased or the Fed has tightened and actually we've

done nothing at all. I think we could defuse that by stating it in the policy record right away instead of 30 days later when nobody reads it.

CHAIRMAN VOLCKER. I'll add another one: Shall we publish the money supply figures weekly?

MR. FORD. You do have the contemporaneous accounting on your list now?

CHAIRMAN VOLCKER. Yes. We have quite a few on the list; I'm now up to H. We're not going to be able to resolve all of these, obviously, but we may get some sense on a couple of the key ones. Let's return after lunch and concentrate on this for an hour or so.

MR. PARTEE. The lunch is here?

CHAIRMAN VOLCKER. Yes.

[Lunch recess]

CHAIRMAN VOLCKER. [Unintelligible] there is a certain amount of duplication that is unnecessary. And I would like to delegate to President Solomon the task of giving us some recommendations as to how we may maintain a detailed record for members of the Committee and otherwise without excessive duplication. If you would give us recommendations at an appropriate time in a coming meeting, President Solomon, I would appreciate it.

SPEAKER(?). Amen.

VICE CHAIRMAN SOLOMON. Just one more blow we're going to strike in favor of deregulation [or] simplification. Okay.

CHAIRMAN VOLCKER. Right. Now, I don't want to take all afternoon on this subject that we are on, if we can avoid it. We have to get to the business outlook and the long-range targets. The first two subjects on my check list that we have been discussing are nonborrowed reserve adjustments and the discount window--its administration and the rate. I get some sense that the feeling is that perhaps a little more rapid adjustment on the nonborrowed reserve [path] might be appropriate. I don't think we can sit here and write a formula for it today. It may be desirable or not to have a formula at some point. The discount window and discount rate, of course, are explicitly a responsibility of the Board of Governors in any event. But I was not encouraged by the discussion that we had this morning that anybody has an ideal solution for getting out of the box that we are in. And it occurred to me just at lunch that this is not a new box either. Under the old operating technique we could have maintained a penalty rate and we never did during these periods; and the discrepancy got extremely wide every time we had a tight money period. So, it's not exactly a new visual problem or real problem. But it is a problem.

In any event, I suggest that we have had enough discussion of that at this point, knowing that we have to come back to the nonborrowed reserve issue anyway in connection with the explicit decision at this meeting and subsequent meetings. And maybe we can do

a little work on a formula. But I think there may be some dissenters; I don't know because they haven't spoken.

MS. TEETERS. This would be a movement back more rapidly to the nonborrowed [path] within the interest rate confines?

CHAIRMAN VOLCKER. Yes. I'll get to the interest rate confines, but at this point it's apart from that. I must say this: The logic of this strict money supply control leads one in this direction. I'm a little nervous about it probably for the very reason that we haven't done it more rapidly in the past. We always get nervous I guess, which is why we're on this technique at all, when we are rather consciously [moving] the interest rate structure a tick. And that's what we're doing when we [adjust the nonborrowed reserve path]. But let me leave it; we'll come back to that quite explicitly in terms of the particular decision today. We may want to say something about it in general terms. As things now stand, I probably would say in my report to the Congress that this is something we probably will be doing. But that would not be quantified.

MS. TEETERS. This is a general question: Are we going to publish those studies?

CHAIRMAN VOLCKER. My current thinking was to publish something like Steve's summary, which is marked preliminary, with appropriate modifications for clarity or whatever, as part of the Humphrey-Hawkins Report. I haven't made a decision about publishing the rest of it. The rest of it may be a bit uneven. I don't know whether it's--

MR. GRAMLEY. We're obviously going to word this to make it available for public use as soon as possible. There's a great deal of interest in it; there's a lot of good material. I think it does credit to the staff and to the Board. I think it really goes a long way in answering many of the criticisms.

CHAIRMAN VOLCKER. Well, part of my problem--I just don't know the answer to this--is whether the authors themselves think it is in a form that it is really ready for publication, given the speed with which it was done and so forth.

MR. AXILROD. Do you mean the summary or the rest of it?

CHAIRMAN VOLCKER. No, the rest of it. I'm not talking about the summary.

MR. AXILROD. Well, I would view the rest of these as virtually final, but semi-final drafts. I would like--and I think also the authors would like--one more opportunity to review them carefully for technical problems.

CHAIRMAN VOLCKER. Yes. Well, I suspect, without even having read them, that given the rate of speed with which they were written the authors need at least another crack at them before we would want to distribute them.

MS. TEETERS. But even if we did some more editing, I agree with Lyle that this is the sort of information that should be made available to the public.

MR. AXILROD. Oh, yes.

MR. ROOS. How would the disclosure of which of these options, if any, the Committee agreed upon become public? Would that be in your testimony to Congress?

CHAIRMAN VOLCKER. Yes, I think my testimony will have to touch upon all the things that we are now discussing. I don't know what we would say about the discount window--maybe not much other than that it's a problem and that we're continuing to look at it. At this point I would be inclined to say that there is a question, which is in the summary, about the speed of the nonborrowed reserve adjustment. Our tendency probably will be to lean toward faster adjustments rather than slower. I can make that kind of comment without being very precise about it. I'm judging that this reflects the Committee's sentiment at this point.

MR. AXILROD. Mr. Chairman, on publication I should mention one thing. The summary memo, if we put that out, has a list of the staff studies. So, if it's put out with the list of staff studies, people will write in and ask for them.

CHAIRMAN VOLCKER. Well, I don't know whether we'd want a list or not, but we'll look at that. I don't see anything the matter with it particularly. Certainly if we're prepared to put them out, there's nothing the matter. But we can probably delay publication anyway.

MR. ROOS. Paul, after we go down the laundry list, if there's a certain amount of indecision on things that some of us think should be reacted to more explicitly, procedurally would we express ourselves here and so be recorded? Or [are our views] not going to be recorded? We're not going to have a vote, I assume, on any of these things, right?

CHAIRMAN VOLCKER. I'm not sure any of these take a vote per se. My thought now is that there would be a qualitative statement about the speed of the nonborrowed reserve [adjustment]. The discount window would be pointed to as a problem, but [I would say that] we're not ready to propose anything explicit as a change. However, there ought to be a frank recognition of the fact that there are problems in that area.

The next thing I have on my list is the question of interest rate bands. I think it is fair to say, explicitly or implicitly though maybe more implicitly, that the speed of the nonborrowed reserve reaction time--and in fact the handling of the discount window can be looked at it the same way--reflects some concern about overshooting one way or the other on interest rates and the fact that that is undesirable. The interest rates bands--everybody has his own view--I don't think have been terribly important. The closest they came to being important was last spring. Every other time we reached [the limit of the interest rate band] we changed the band. And we probably would have changed it last spring if we had reached the limit

more forcibly, but we teetered on the edge for a while. But I think that is consistent with some implicit coloration in our minds of not wanting to overshoot on interest rates too much; that is a factor in how these other things are set. [Steve], this interest rate band question isn't one on which you made any particular proposal pro or con in your summary, is it?

MR. AXILROD. No, only indirectly. At the end we suggested that to the degree the Committee thinks the federal funds rate target has any validity, it means narrower bands. Of course, I ought to say that all the model work [assumes] unconstrained interest rates. With unconstrained interest rates, as President Balles mentioned, their model gives a little less interest rate volatility than ours does.

CHAIRMAN VOLCKER. Well, it seems to me that the really operative question here, since I don't view these bands that we have had as having constrained anything much, is whether anybody wants to have narrower ones and actually have them be constraining. I suppose it means--

MS. TEETERS. Well, I was certainly opposed to raising them and then taking them off this last round. Sure, we have moved them up but we haven't moved them down to the bottom number; nevertheless, we haven't hesitated to take the top off. I think it's well known that we could have gotten the same degree of restraint without having to go to 21-1/2 percent interest rates. So, I'd be more interested in seeing that the bands stick rather than that they become elastic.

CHAIRMAN VOLCKER. I'm not quite sure how we would have gotten the same degree of restraint. It may have been excessive, but it wouldn't have been the same I don't think at that [unintelligible].

MS. TEETERS. No. [Unintelligible] it was excessive at 21-1/2 percent.

CHAIRMAN VOLCKER. That's a little different from saying--

MR. GRAMLEY. I think the fact that the Committee has to get together once we run into the upper or lower end of the range is a useful procedure, even if the Committee decides ultimately to raise or lower [the band]. It requires careful thought and another round of decisions, and that's the sort of thought [process on] interest rates that I think is important. The Committee ought not absolve itself of responsibility for what is happening in the credit markets. Though I think probably lowering the ranges would not be a good idea in terms of public--

CHAIRMAN VOLCKER. You say lower. Do you mean narrowing the range?

MR. GRAMLEY. Narrowing the range, I'm sorry. I wouldn't want to lower interest rates at this time, as a matter of fact. I don't think narrowing the range is a good idea, but I wouldn't want to widen the range because I do think that Committee review is a useful function.

MR. SCHULTZ. I think it's a particularly useful function at times of extremes. It seems to me that most of the time the band

doesn't make much difference. We don't pay too much attention to it. It's easily changed. But there are times when it ought to bring forth some very serious discussion. Last spring it did bring forth some serious discussion on whether we should allow [the rate] to go lower. We probably ought to have had those discussions earlier. And in the last month or two it has been of some importance to think about the level of interest rates. It seems to me that most of the time it makes more sense to have the emphasis on the money supply, but there are times when the interest rates get to be well worth considering because they have a tendency to go to these extremes.

MR. WALLICH. I think the main disadvantage of the band is that it gives some people a justification for saying that we're really targeting on interest rates. Since I don't believe that that's the case, I think that's a wrong criticism. But I think the usefulness of the band exceeds the advantage of defusing their criticism. If one were to defuse it, there would be some other criticism.

MR. PARTEE. Well, we could take care of that, though. We could have in the directive a standard phrase that says the Manager will inform the Chairman if it appears that the cumulative movement in federal funds since the time of the meeting is likely to exceed 300 basis points, at which time the Chairman will decide whether or not to call a meeting. That way we would never have a stated band that people would look at. What we would have is a plus or minus 300 basis points from where the funds rate started. So maybe we could improve our public posture.

MR. WALLICH. Well, that's an interesting suggestion.

MR. ROOS. If I may, Mr. Chairman, I'd like to go on record as favoring total elimination of the interest rate bands. From the conversation throughout this morning and in the studies and comments that have been made and things that are thought--although who knows what things are thought--I think there is an implicit awareness of explicit and implied interest rate constraints. I believe that acts in a contrary manner to achieving our aggregate targets. If we're interested in consulting frequently on interest rates, I guess we should also be interested in consulting if the money supply seems to be functioning in an unpredicted manner. I think there's a very basic contradiction in trying to control interest rates explicitly or implicitly and achieving our monetary target objectives. And I would express myself as favoring the total elimination of any specification regarding interest rates.

MS. TEETERS. Well, I find that hard to accept. We're getting to the point where we're transmitting very volatile [short-term] interest rates into the long-term market. Even though we haven't been able to detect it in the past 15 months, that has to be something that is going to disturb all sorts of things over a longer-term period. I think we're just abrogating our responsibility if we say we're not going to pay any attention at all to the interest rates.

MR. WALLICH. Well, Nancy, I agree with that. But at the same time I recognize that the main volatility that carries into long-term interest rates comes from inflation and not from our procedures because it is very implausible that we should be changing our policy

from month-to-month even though that gets written up in various market comments.

MS. TEETERS. We had the inflation before we changed our procedure and it wasn't showing up to that degree in the long-term rates.

MR. WALLICH. It hasn't been so bad either.

VICE CHAIRMAN SOLOMON. If we were to move to adopt new recommendations immediately, then I think Chuck's formulation would make more sense.

MR. WALLICH. Yes.

VICE CHAIRMAN SOLOMON. I'm not sure, but--

CHAIRMAN VOLCKER. Well, the trouble with Governor Partee's suggestion--it's good if you want to achieve the result that you want to achieve--is that other people may have a real concern about [the level]. If they are more concerned about a rise of 300 basis points from 21 percent than they are from 15 percent, you have a problem.

MR. PARTEE. Then we'd have to say 200 basis points. That would be something to do.

MS. TEETERS. I don't think so.

CHAIRMAN VOLCKER. Yes, that kind of defeats the--

MR. GRAMLEY. I'm not quite sure how plus or minus 300 basis points from the current level differs from the range of 600 basis points around the current level.

MR. PARTEE. We simply avoid saying what the range will be.

CHAIRMAN VOLCKER. But we haven't always been in the middle of these ranges. Both in the spring [of last year] and just recently we've been around the upper end of the range that we set.

MR. PARTEE. We'd have to put it in the center.

MR. BALLE. I'd like to say, Mr. Chairman, that I am intrigued by Governor Partee's suggestion. I hope it will get some serious consideration. I would not be in favor of dropping the range altogether, and that would be a way of getting out of the appearance of having a range. I think it would give us a great deal of flexibility and we could make the decision meeting-by-meeting as to whether the [checkpoint] should be 300 or 200 or 400 basis points.

MR. FORD. From one meeting to the next? May I ask for a clarification? Are you saying that whenever we have a meeting, we state the monetary aggregate targets and then always have a proviso to the Desk that the Manager will tell Paul any time we're going to move 300 basis points plus or minus from where the funds rate was when we left the meeting? And that would call for consultation on the subject of whether we would want to let the rates go?

CHAIRMAN VOLCKER. Yes.

MR. PARTEE. And then we could change the 300 to a different number if we wanted.

CHAIRMAN VOLCKER. If you change it, then I think you'll really be detracting from the basis--

MR. PARTEE. I have in mind having a standard of 300 basis points. But in an exceptional case, such as Nancy referred to when rates are at a very high level, we might want to constrain them.

MR. FORD. Since we meet on average every 5 to 6 weeks--I'm just trying to remember the history of the market [rate movements]--that would have triggered a discussion on couple of occasions, right?

MR. GRAMLEY. It seems to me, however, that the market is going to interpret your suggestion in a very different way. If the fed funds rate on the day of the Committee meeting is 17.42 percent and we say 300 basis points on either side, the newspapers would say that they have figured out that the Fed's range is 14.42 to 20.42 percent. It makes a lot more sense to say it's 14 to 20 percent. I think that's what they're going to do. Then if we start playing games and say we're going to narrow the range down to 200 basis points on either side because we don't want rates to go up too far, they're surely going to say we are playing the rates instead of the money supply.

VICE CHAIRMAN SOLOMON. I don't know how important all of this is.

SPEAKER(?). Is it important?

CHAIRMAN VOLCKER. Well, I think it could be. We could vary on it. What scale are you on here?

MR. PARTEE. My basic position is that I think we ought to widen the range.

MR. SCHULTZ. My position is that we ought to stay away from a mechanical approach. That's what gives us the most trouble. If we don't retain some elements of judgment in what we do, I think we're in trouble.

MR. BALLE. I agree.

MR. SCHULTZ. I'd just hate to get hung up on any of these mechanistic kinds of solutions. I don't think any of them work.

MR. BOEHNE. I agree with that. There clearly is an inconsistency in trying to control money and interest rates. But it seems to me it is the job of this Committee to resolve the inconsistency. And I think we ought to have ranges. Chuck's idea is an interesting variation, but I would favor maintaining a range. If it has to be raised or lowered, it seems to me that's what this group gets paid to do, whether it's by a mechanism or--

CHAIRMAN VOLCKER.. Well, I would suggest that when we write this report it should say that on balance the Committee wants to retain interest rate bands. I would emphasize in the reporting that these bands have not really been constraining, but in a number of instances during the past year they have served as occasions for the Committee to consider what it wanted to do. And the report should note that virtually every time this happened, the range has been changed. I think it has been changed every time.

MS. TEETERS. Not the bottom of the range.

CHAIRMAN VOLCKER. Well, did we ever have a consultation and not change it? I don't think so. On that bottom, I don't read that experience quite the way you do. We flirted with a conflict, but we never really had it. Just about the time when we would have had to have a meeting, interest rates began going up. We may have had a meeting and not changed it but I don't know when.

MR. PARTEE. The fed funds rate is a constraint. I certainly approve of your saying this in public, but I think we need to recognize that it's a constraint.

CHAIRMAN VOLCKER. Well, I don't know what you're saying because I disagree with you in terms of these bands. We've changed them every time we've come [to the limit of the band]. Now, I think it is a constraint implicitly in our behavior in terms of rapidity of movement. But I just flatly disagree with you that these outside limits have been a constraint. I just observed that when we met and said we had a problem [with respect to the interest rate constraint], the constraint has been changed.

MR. ROOS. Paul, when we discussed before the problems of adjusting our reserve paths more quickly, it was specifically said that one of the costs--to those who view it as a cost--is wider fluctuations in interest rates. So, maybe we can convince ourselves within this room that interest rates aren't a factor, but I think they lurk in the back of Peter's mind and--

CHAIRMAN VOLCKER. Now, wait a minute. They do lurk in the background, and I don't deny that in terms of rapidity of [adjustments]. All I am saying is that these bands themselves--I ought to be in as good a position to know as anybody--have not constrained [our actions].

VICE CHAIRMAN SOLOMON. Well, they do at 8 and 20 or 8 and 21 percent.

CHAIRMAN VOLCKER. I don't know what would have happened. What happened when we ran into 21 percent? We removed [the limit].

MR. RICE. Well, at some point we might not.

CHAIRMAN VOLCKER. Well, that's why they're there. At some point we might not.

VICE CHAIRMAN SOLOMON. On the down side wasn't 8 percent a constraint?

CHAIRMAN VOLCKER. That's debatable on the down side.

VICE CHAIRMAN SOLOMON. I'd have to agree with you anyway, but--

CHAIRMAN VOLCKER. The closest we came certainly was on the down side.

MR. GRAMLEY. Instead of lurking in the background, they have lurked in the foreground.

CHAIRMAN VOLCKER. We were right on the edge. That's the clearest case when it could have been a [constraint].

MR. BALLE. May I ask, Mr. Chairman, whether you're inferring that in your view we could get along without a range then?

CHAIRMAN VOLCKER. No, frankly, I think it's a good idea. I would even question whether we should have removed it every time we did. But we did.

MR. FORD. Well, if I may comment on Governor Partee's statement that the range ought to be widened: It seems to me that if we're going to issue a report on changes in monetary policy for the next year compared to last year, and if one of the things we're going to say is that we are going to move faster against movements off the path on reserves, there has to be a logical symmetry in that we have to say something that is consistent with that on the other side. Either widen the band or make a stronger statement that we will adjust right away.

CHAIRMAN VOLCKER. Again, I think the constraint has been more an implicit one in that we have not wanted to move too fast in the short run. And that is true whether we had a lot of room within the bands or we didn't.

MR. PARTEE. Yes, in that sense it has been a constraint, because we knew that a rapid adjustment in nonborrowed reserve paths would affect the funds rate.

CHAIRMAN VOLCKER. Well, that is true without question; but I'd say that is true whether or not we're near or away from the--

VICE CHAIRMAN SOLOMON. Well, I think there is consensus that we all want a meaningful discussion when--

CHAIRMAN VOLCKER. Well, we don't all.

VICE CHAIRMAN SOLOMON. With a few exceptions. Well, I said a consensus. I think it's a minor question as to whether to word it in the traditional way or to word it as in Chuck's approach.

MR. PARTEE. Yes it's minor; I think there's a little change in emphasis.

CHAIRMAN VOLCKER. Well, I think there is a real difference. It would happen rarely, but there would have been a difference last spring and summer and right now when in a sense a lot of people would

want it asymmetrical. Your presumption is that it would be more symmetrical. I detect that we do not have unanimity but a consensus. [The next topic is] contemporaneous reserve accounting.

MR. BLACK. Mr. Chairman, may I make a statement on that?

CHAIRMAN VOLCKER. You may.

MR. BLACK. It seems to me that all these points we've been making have a good deal of merit under the lagged reserve accounting system. Anything we can do to make the volume of borrowing more predictable within reason is certainly to be desired. I think it's important that we adjust our nonborrowed reserve target more promptly, as we agreed, to offset unexpected changes in borrowing. And I would say we have to be prepared to use a pretty wide federal funds rate range. But all of these things certainly seem to me still to engage us in the very difficult practice of trying to produce a demand curve and trying to say something about what the nature of that demand curve for money really is. And I don't think we are going to be able to do that very successfully. So to me the only real solution out of our dilemma, if we really want to control the aggregates, is to move toward contemporaneous reserve requirements. There is a way I think that can be done--and this is just a tentative thought--that would be palatable to our constituents. That would be to make the period about one month but still require them to report their deposits daily. That would reduce some of the burden of shifting from the lagged [accounting], which is certainly easier for them to handle. And it would also make it easier for us to control the total supply of reserves because then our deviation in the volume of borrowing could be offset more easily, particularly if it occurred in the first part of the period. So, I think that's really something we ought to move toward.

MR. SCHULTZ. I don't understand.

CHAIRMAN VOLCKER. I'm not sure I can think this through. Let me ask Mr. Axilrod and it will give me time anyway. If we lengthen the reserve averaging period--let's say it went from a week to a month--and said it was contemporaneous, it seems to me we would end up at the end of the period just where we are now.

MR. AXILROD. Well, I was trying to think that through. I think that would require yet another one of our studies of these various proposals.

MR. BLACK. Just accept it on faith, Mr. Chairman!

MR. AXILROD. I do think it results in the problem of delaying reaction into the third or fourth week [with the banks thinking] maybe the Fed will come and save them finally. But I would have to think through whether that is not reproducing, in effect, a two-week lag or something like that. We would just have to analyze that carefully.

MR. BLACK. Well, I think it makes it possible to hit a total reserves target. And if we're going to control the aggregates, I think we have to be able to do it. We really can't do it as well as I would like under lagged reserve requirements, although I think we can

do better than we have been doing. And I say this as somebody who was involved in introducing lagged reserve requirements; I have a bias in favor of keeping them. But I think we now have a situation where we can give the banks something that's almost as palatable and not have a bad public relations effect and at the same time improve our control.

CHAIRMAN VOLCKER. I must say my concern about this is not any public relations effect or difficulties with the banks. We can make the banks do what they have to do. My concern is that the logic is probably to do this, but the logic may not be very strong. And we may in a sense be promising [too much]. People will say we made a great change and it may be that not much is different after we've made the change except that we've complicated our own life a little as well as the banks' lives. And we could get an adverse reaction because nothing much has changed. That's the only thing that really bothers me about this.

MR. BLACK. Well, there are a couple of positive things. One is that I think we've tended to hide behind lagged reserve accounting sometimes and used that as an excuse for not really pursuing our aggregate targets very actively. I'd like to eliminate that little temptation, which I think we all share. The second thing is that if we did this, we'd get the monetarists off our back on that particular issue and maybe they could then make some positive contribution toward improving the control mechanism.

CHAIRMAN VOLCKER. Yes, but I think that's--

SPEAKER(?). That'll be the day!

CHAIRMAN VOLCKER. I wish I thought it worked that way.

MR. PARTEE. How about 100 percent reserves?

CHAIRMAN VOLCKER. Mr. Ford.

MR. FORD. Well, you're right to be concerned about the problem it creates for the banks--especially for a large branch bank system--because I was involved [as a banker] in researching this when it was discussed as a possibility by the Fed some time ago. We have to give them warning if we are going to do this.

CHAIRMAN VOLCKER. Oh, I think we have to assume that we will have to give them substantial warning if we do this.

MR. FORD. I know that. But having said that, if we give them warning, there's no question that the banks can gear up to provide [the data]. As to the theoretical arguments on things like the discount window and so on, there is disagreement among the theoreticians as to how much goes toward getting us out of the box that you and I were discussing earlier. But there's no question about the direction. To some extent it does get us out of the box. Some people say a lot; some people say a little. Therefore, given my concern about the absurdities of the discount window operations with thrifts thrown in and everything else that is happening in that area, I feel it's only logically consistent. I am a strong advocate of moving, with proper notice to the banks, toward contemporaneous

reserve accounting but not overselling it, though, because I think you're right that if we oversell it, it could hurt us.

CHAIRMAN VOLCKER. The logic is in that direction; it's just a question of how much. It may be fairly trivial. That's my concern.

VICE CHAIRMAN SOLOMON. Will you feel a need to move that quickly, in view of the fact that we're still trying to iron out the reporting problems and the inconsistencies?

CHAIRMAN VOLCKER. Well, I assume if this is done, it's going to have to go out as a proposed regulation for comment. Now, Bob Black raised another question, which is a relevant question. If we're going to make this change, should we consider any other change in the reserve period or the carryover, and put it all out at the same time? If we're going to do that, it's going to take a couple of months to prepare the regulation, I suppose, because we would have to debate these other issues too.

MR. FORD. Yes. And a complication might arise if we're now allowing some of them to report quarterly. Could that complicate it?

MR. BLACK. Yes, it does.

CHAIRMAN VOLCKER. I think the assumption would be that we would just go on contemporaneous reserve accounting for the bigger banks.

MR. FORD. Okay.

SPEAKER(?). Sure.

MR. CORRIGAN. It has been asked whether we're thinking about bigger banks and contemporaneous reserves literally or with a one-day lag.

CHAIRMAN VOLCKER. A one-day lag.

MR. CORRIGAN. The one-day lag.

VICE CHAIRMAN SOLOMON. Are we going to have more revisions or more errors as a result of this move?

CHAIRMAN VOLCKER. Well, we will have errors with that, which is a complication for us. We have estimates of errors on required reserves, which we don't have very much of now. But as soon as we go on contemporaneous reserve accounting, we're going to have lots of errors in our own estimates of required reserves.

SPEAKER(?). Right.

MS. TEETERS. Is this going to cause major operating problems at the Reserve Banks?

MR. MORRIS. Yes.

MR. CORRIGAN. Yes.

MR. FORD. Yes. We need time just like the commercial banks.

MR. MORRIS. A lot.

MR. BALLES. There's a long lead time.

MR. CORRIGAN(?). And a lot of programming.

CHAIRMAN VOLCKER. That's what Milton Friedman calls "bureaucratic difficulties."

MR. BALLES. That's because he doesn't know the facts of life.

MR. GRAMLEY. Milton Friedman would argue that we should impose the least cost on the private sector, too, except in this case.

MR. BLACK. It seems to me, Mr. Chairman, that if we did this, we wouldn't have to go through the process of trying to estimate what the demand for money looks like, what it's shaped like, and all those things. We would make our best estimate of the reserves it takes to give us the [desired] growth in the aggregates. And what happens is that the demand for money, whatever the shape [of the curve] is, will determine the level of the federal funds rate.

CHAIRMAN VOLCKER. Well, that implies that there's no slippage either in our estimates or in the linkage. And we just had this plus or minus 10 percent a month slippage.

MR. BLACK. No, I'm not ruling that out; I recognize that there are slippages. But I think we'd come very close to hitting a total reserves target, particularly on a monthly basis. And I don't mean a flat, identical percentage increase each month. I think we would have to adjust that total reserves figure for the non-monetary liabilities and what they used up or released in the way of reserves. We'd have to construct the target path very much as we do now. But we wouldn't have the problem of the banks being able to borrow and [raise] the reserve targets.

CHAIRMAN VOLCKER. Sure we would. They can still borrow.

MR. BLACK. Well, they wouldn't [raise it] all that far, though, because--

CHAIRMAN VOLCKER. That's an expression of faith on your part. How do you know?

MR. BLACK. Well, I think they could [raise it] to some extent. But just the lengthening--

CHAIRMAN VOLCKER. Well, this is the whole argument. What difference does it really make? The logic goes in your direction, but I don't know why you think it's quantitatively important. Banks don't determine the money supply; an individual bank doesn't. It sits there and sees what deposits it has today and it will come up with those reserves tomorrow. Under CRR what we would be doing is that we would make them come up with those reserves tomorrow, or at least in the

present week, instead of two weeks later. But why do you assume from that a vast difference in bank behavior?

MR. BLACK. Well, the point that you frequently make is that the banks are going to get the total reserves that they need that are based on deposits two weeks earlier. And in this case, if a bank is hell bent to make loans because it has loan demand, it's going to go ahead and probably borrow some at the window. But we can offset that during the period because we can cut the nonborrowed reserve part of that. And that's going to set in motion a process regarding bank credit that is going to reduce required reserves during that period. There's no way we can reduce them under lagged reserves.

CHAIRMAN VOLCKER. Yes, the increase in borrowing will set in process a motion, but we can get that same increase in borrowing if we have the intestinal fortitude to do it. I think at the present the main thing that would change, frankly, is that the market would be making more of these judgments about what the level of borrowing was because we wouldn't have the information fast enough to do it. So--

MR. WALLICH. Well, doesn't the borrowing begin two weeks earlier under this system so that the adjustment comes faster?

CHAIRMAN VOLCKER. Yes, all things equal.

MR. AXILROD. Well, one week earlier.

CHAIRMAN VOLCKER. One week earlier.

MR. AXILROD. It's one week because of the way we operate. That is, we don't wait. If deposits are running high and borrowing has to be high for that four- or five-week period, we immediately put that in. So, it's only if it happens the very next week instead of waiting two weeks when the required reserves are technically higher [that we] wait until the deposits are higher in that week. So the effective lag is really cut down from two weeks to one week by the way we operate.

CHAIRMAN VOLCKER. Well, it all goes in that direction. But it's just a question of magnitude.

MR. BLACK. Yes, I know. It's a matter of degree. And I think we can operate under lagged reserves; I never would have advocated that originally if I hadn't thought so. But I believe we can do it a good deal better under contemporaneous; and I think the longer period gives banks a chance to do some arbitrage over time that might iron out some of the interest rate fluctuations that are of concern to a lot of us around the table.

VICE CHAIRMAN SOLOMON. Well, why did we change in the first place? Didn't we originally--

MR. BLACK. It was a bank relations move, basically, Tony. We conjured up a lot of reasons.

VICE CHAIRMAN SOLOMON. Now you no longer feel the need to accommodate the banks?

MR. BLACK. Not to the same extent. We were also operating on a net borrowed reserve target, too. And we could hit that more precisely [with lagged reserves]. It didn't have the same meaning, to be sure, because required reserves had been determined on the basis of deposits two weeks earlier. But it was easier to hit it. But the basic reason was that it was very difficult, as Bill Ford said awhile ago, particularly for the large banks with branch systems to know what their required reserves were even by the end of the period. So they estimated. And it's still--

MR. FORD. But the Fed did this in the late '60s, right?

MR. BLACK. It was done for bank relations purposes mainly.

MR. FORD. Yes, but now it should be a lot easier to go back to it technically because more of the banks are moving toward being on line with their branches in terms of their EDP operations. So it should be a lot less painful if we reinstate it now than it would have been with the same--

VICE CHAIRMAN SOLOMON. Well, I don't really understand. I can understand those of you who want to impose these extra burdens on the banks because you think it's a major improvement to [monetary control] but [not] those of you who think it's a very minor one. I don't quite understand why we're so concerned about not increasing the burden on the banks in other areas but in this area it's okay. We're going to get very minor monetary policy--

MR. SCHULTZ. There are some of us who do feel that way, Tony.

MR. WALLICH. Well, it's a dilemma. We can say that we've got all the instruments now to achieve the degree of money control that we really want, say, over three months, so why improve the techniques? But I think this is a speeding up. It may reduce interest rate variability because certainly in the absence of an action by the Desk it seems to have been econometrically demonstrated that there is more instability of interest rates when we're up against fixed reserve requirements than when we're up against requirements that we can modify slightly during the week in question. If that continues to hold--and I don't know if that's still the view--then I think there is quite a payoff.

MR. SCHULTZ. I'm not sure I understood. You were saying we get less interest rate variability with contemporaneous reserves?

MR. WALLICH. [Yes, under] contemporaneous because, in the lagged case, there's a given amount of reserves that the banking system must get if the Fed doesn't supply them. Then the excess reserves have to be worked down to zero, in effect, and carryovers are created. Whereas if the banks are able by reducing their reservable liabilities to reduce the amount of reserves required--

CHAIRMAN VOLCKER. I don't think that brings lower interest rates, Henry. An individual bank can't reduce its reservable liabilities. It can do something on the assets side that reduces some other bank's reservable liabilities. But that would be accompanied by more pressure on the market.

MR. GRAMLEY. What Henry is saying, I think, is that for any given degree of precision of monetary control, we will have less variability of interest rates. Or, for any degree of variability of interest rates, we get more precision of monetary control. In other words, what is going to happen to the demand for reserves is that under present circumstances the demand for reserves has elasticity which depends only on the elasticity of demand for excess reserves. What this is going to do is to introduce into the overall demand for reserves an elasticity which comes from the demand for money. So overall demand for reserves will be a little more elastic with respect to interest rates than it was before.

MR. BALLES. Right.

MR. PARTEE. What we get is a quicker change in interest rates and, therefore, it doesn't have to be as large. It's a special case of the general case that has been well postulated in [unintelligible].

MR. AXILROD. There is an offset to that, I think. That's in the intermediate run, as I was trying to say earlier. We might get a little less variability because the process might start a bit sooner. In the very first week banks extinguish some deposits instead of borrowing all the money so there is a little less interest rate [effect] than if we had to wait until the second week or the third week. But in the very short run we might get more up and down jiggles because by our mechanism now we sort of eliminate those by estimating the demand for borrowing and spreading it over the weeks [of the reserve adjustment period]; so we're accommodative to the up and down jiggles in deposits. We will know those up and down jiggles in deposits under contemporaneous reserves and thus we're likely to get more up and down jiggles of the funds rate with contemporaneous reserve accounting, I believe.

CHAIRMAN VOLCKER. Anybody want to--

MR. SCHULTZ. And there are some who believe that those swings would be rather extreme.

MR. CORRIGAN. That's right.

MR. AXILROD. Well, they may be.

MR. BALLES. Is there anybody around the table who remembers how things worked prior to 1968 with regard to the jiggles?

MR. GRAMLEY. We were setting fed funds rates then and [experienced] no problems.

CHAIRMAN VOLCKER. When we're setting the federal funds rate, it won't make any difference. That's right.

MR. CORRIGAN. Part of the problem in terms of pre-1968, too, is just the amount of churning in the banking system then as opposed to now. The Fed-wire didn't even work prior to the--

MR. AXILROD. Well, I think we were essentially on a variety of targets, but the way to describe them all was "the tone and feel of the market."

MR. CORRIGAN. No, I mean just the turnover of financial assets in the [banking] system.

MR. AXILROD. Yes, and we'd smooth that out. It was less jiggling in some sense because the Desk was tending to offset the jiggling.

MR. FORD. As I recall the theoretical discussion--some of the staff members may be able to enlighten me on this--one of the factors that keeps us from getting a big payoff for going to CRA is the difference in reserve requirements among different size banks. Isn't it right that that is another source? And with the new law, that tends to smooth those differences. Maybe that, too, would help reduce the noise that comes with moving to CRA.

MR. BLACK. I don't think there's any doubt about that.

MR. FORD. Isn't that right in terms of the theoretical arguments? Yes, but why doesn't CRA give an immediate linkage?

CHAIRMAN VOLCKER. Well, that would make a difference. But I think the biggest single source of slippage is going to remain the discount window. Nothing in going to CRA says that they can't borrow.

MR. BLACK. But we can squeeze them by cutting the nonborrowed reserves.

CHAIRMAN VOLCKER. Sure we can.

MR. BLACK. Do you think we can't really do that now?

CHAIRMAN VOLCKER. Yes.

MR. BLACK. We've got to let them have the total reserves they need to meet their requirements.

CHAIRMAN VOLCKER. Yes, but we squeeze them by making them borrow more. And that has been the limitation on our operations now. We didn't want to go very fast. Now we can go faster within the week but I--

MR. BLACK. There's nothing in this procedure that would preclude putting in a range on the federal funds rate if we did not want to offset the borrowings that the banks would have the option of entering into. We would not have to do that fully. I'm just saying that we could do it virtually 100 percent over a monthly period if we wanted to. Now, that might involve more volatility in interest rates than a lot of people would like to see. But at least the mechanism is better because we don't have to fool around with trying to estimate the demand for money, which I just don't think we're ever going to be able to do. The appetite in the short run for money is just unpredictable in my judgment. And to me the necessity of doing that--coming up with a federal funds rate that would tell us what the borrowing is going to be--is a key part of the present processes. And

we've been notably unsuccessful in that. I think we can improve it, but I don't think we can ever be terribly successful with it.

MR. AXILROD. Mr. Chairman, I think I should add--because it comes out of President Black's comments--that we have a heck of a time predicting the demand for money. But we have [difficulty]--and that was one of the results of the research--predicting the supply factors that are affecting what money is going to be, such as deposit mix, demand for borrowing, and things like that, given interest rates and GNP and money. Contemporaneous reserve accounting might strengthen that linkage but there are a lot of other factors that would argue for permitting the borrowing to do some of the work, which would tend to offset the misestimates on deposit mix and things like that. So, I wouldn't think that going to contemporaneous reserve accounting would automatically mean we're going to be better off because we can chase borrowing up and down. A certain amount of borrowing seems necessary to offset our own multiplier misses, so to speak.

MR. ROOS. But doesn't your--

MR. BLACK. I agree with that, Mr. Chairman; I didn't mean to suggest otherwise. And I didn't mean to suggest that a one-month period was absolutely right because we haven't had a study on that. But under the present procedures, we have to estimate a demand and a supply function for money to operate, if I understand correctly. Under CRR, all we have to do is estimate the supply. We have eliminated the most difficult estimating problem. But far be it for me to say that the estimating problem would not still be difficult. I think it would be, but I think it would be more manageable. It takes a lot for me to eat crow on this because I was involved, as some of you may remember, in this [move to] lagged reserve accounting. And I now think we probably were wrong on it. But it was done to make things easier for the banks, basically.

MR. WALLICH. Is the reason we don't have to estimate the demand function that the volume of the money can adjust during the period?

MR. BLACK. That's right. We figure out what volume of reserves we think it would take to get the growth in the money supply we want and put out that volume of reserves. There are things that can offset it, as we all know. Borrowing can go up and we'd have to offset that; or we could have an unexpected change in the level of float and we'd have to offset that. I don't mean to suggest that we can hit it with perfect precision. But if we do [go to CRR], it seems to me that the demand for money basically determines the level of the federal funds rate. I recognize, as I said earlier, that some might want to put a constraint on that. But we could certainly--

MR. PARTEE. We've just been talking about that.

MR. BLACK. Yes. Not everybody wants to do that; I'm just saying that some want to put a constraint on it. But we could do that, which means that we would not pursue the supply of reserves as actively as, say, Larry Roos would like or as I would like. We would at least tip our hat toward what this procedure was doing in the way of creating volatility in the federal funds rate. We would diminish the ardor of our pursuit for a while in deference to what it was doing

to interest rates. I think that's perfectly compatible and a person can argue for that. As I admitted to Lyle a while ago, I think these large gyrations we've had in interest rates have been very upsetting to businessmen who are trying to plan, and I would like to see those gyrations eliminated. The best way to eliminate them is to do what we've said we wanted to do: Get the aggregates down to a lower rate of growth so that we get rid of some of the inflation. I think that will do more to remove volatility in long-term rates than anything else. That's something I can't prove empirically but it certainly seemed to be true in 1960-64 when we did have a relatively low rate of growth in the aggregates.

CHAIRMAN VOLCKER. Let me just ask about the extremes. I'll ask [for you views] symmetrically, but I have to start with one extreme first. Who feels very strongly that they would like to go to contemporaneous reserve accounting? [Secretary's note: Messrs. Black, Ford, Roos and Winn raised their hands.]

MR. BALLE. And the next question is who is not at least strongly--

CHAIRMAN VOLCKER. Well, let's have the other extreme now. Who feels strongly that we should not? [Secretary's note: Mr. Gramley raised his hand.]

MR. GRAMLEY. On the basis of cost to banks alone.

MR. SCHULTZ. Very strongly or just strongly?

CHAIRMAN VOLCKER. The same amount of strength that I asked on the other side.

VICE CHAIRMAN SOLOMON. I'll join Lyle.

MR. CORRIGAN. I think I will too.

[MR. BOYKIN. I will also.]

VICE CHAIRMAN SOLOMON. I'm on the margin between moderately and strongly opposed.

MR. SCHULTZ. Yes, I'm with Tony. If he's going to raise his hand--

CHAIRMAN VOLCKER. Wait a minute. We may be--

MR. BLACK. I hope none of you will tell [Irv] Auerbach how I voted!

CHAIRMAN VOLCKER. You have listened to the discussion, including the point that Bob Black made that if it turned out that we had an excessive amount, however defined, of instability in the federal funds rates from day-to-day that we might want to change our techniques and constrain that more directly. Now let me ask: Given all the discussion, who would favor going in this direction enough to want to make the change? That includes the people who want very strongly to do it.

SPEAKER(?). When?

SPEAKER(?). With an announcement?

MR. FORD. We assume this is with time for everybody to get their acts together?

CHAIRMAN VOLCKER. Yes, with adequate time and all the rest.

SPEAKER(?). I don't understand this.

MR. WINN. I don't know what we're voting on.

CHAIRMAN VOLCKER. Considering the disadvantages and how you appraise them, you are voting--whether you feel strongly or weakly--on whether on balance you'd make the decision to go [to CRR].

MR. PARTEE. In due course.

MR. CORRIGAN. Well, on balance, if we did something with deficiencies and so forth, I'd go.

CHAIRMAN VOLCKER. Yes, but you just voted in the opposite because it says--

MR. CORRIGAN. No, no. Just [on changing] the lagged reserves regime itself. But I think if we did some adjustments--

CHAIRMAN VOLCKER. Well, all right, just on [changing] lagged reserves then. Put your hands up once more. I just want to get some sense of how many. [Secretary's note: Messrs. Balles, Black, Boehne, Ford, Guffey, Morris, Partee, Roos, Wallich, and Winn raised their hands.] Okay, let me ask the opposite; it should be all the rest. On balance, who would not go, either strongly or weakly?

MR. PARTEE. Isn't somebody going to be undecided?

MS. TEETERS. Yes. Actually, I'm just indifferent. We've argued we will proceed with--

SPEAKER(?). It puts you in the perfect position.

CHAIRMAN VOLCKER. Well, all right; you're permitted to be indifferent.

SPEAKER(?). Can we vote for indifference?

CHAIRMAN VOLCKER. We have a majority who would like to go for it. The next question would be--

MR. BOEHNE. When?

CHAIRMAN VOLCKER. And how? And would you raise all these questions about the reserve averaging period and the--

MR. AXILROD. The Board has already announced it is thinking tentatively about doing it by September of this year.

CHAIRMAN VOLCKER. I know.

MR. PARTEE. Yes, in principle.

CHAIRMAN VOLCKER. I understand.

MR. PARTEE. But, certainly, the carry-forward and carry-back would have to be a part of all that.

MR. CORRIGAN. If we got into operating that way, we really would need to look at the whole ball of wax.

MR. GRAMLEY. What do we gain in terms of what you want for monetary control? That's why we're doing this.

MR. PARTEE. Yes.

MR. GRAMLEY. If we go ahead and lag it all over the place with carry-forward and carry-back, the whole purpose of considering reserve requirements--

MR. PARTEE. Yes, absolutely. We'd have to weigh the pinch-points. I'm not arguing that we would do so much carry-forward.

MR. CORRIGAN. No.

MR. PARTEE. But it would do away with the whole effect.

MR. CORRIGAN. No, it just provides another safety barrier.

MR. PARTEE. But we are going to have to study the question to see whether they are pinch-points.

CHAIRMAN VOLCKER. You did a memorandum on this a year ago, didn't you?

MR. AXILROD. We've had several on this subject of carry-forwards and carry-backs.

CHAIRMAN VOLCKER. I'm trying to remember. Do we have any study in the various studies on contemporaneous reserve accounting that brought these together?

MR. AXILROD. Do you mean the carry-forward and carry-back?

CHAIRMAN VOLCKER. The carry-forward, carry-back, and the change in the reserve averaging period.

MR. AXILROD(?). Mr. Lindsey?

MR. LINDSEY. We considered all those issues, except for lengthening the reserve averaging period, in a memo that went to the FOMC about nine months ago.

MR. AXILROD. But we could put all this together again, and we certainly would, prior to further discussion by the Board. That would be the intention, I assume.

MS. TEETERS. Steve, if we lengthen the carry-forward/carry-back, doesn't that increase your difficulty of estimating reserves at any one point? Doesn't your estimating procedure get more distorted?

MR. AXILROD. We have never been able to convince ourselves on that. It's a fine point as to whether widening those offsets the advantages of going to contemporaneous accounting, if you think the advantage is better control of the money supply in the short run. CRR does tend to make our multiplier a little less loose, clearly.

MR. SCHULTZ. Mr. Chairman, I want to argue for not doing everything at once. It seems to me that it makes a lot of sense to move more rapidly on nonborrowed reserves. I thought I heard practically everybody say they wanted to do that.

MR. WALLICH(?). Not me.

MR. SCHULTZ. Well, I said practically everybody. I could have said everybody who counted, but I was trying to be nice!

MR. WALLICH. I'm wounded!

MR. SCHULTZ. If we throw all these other changes in there all at one time, I'm not sure that we're going to know what the heck is doing what.

CHAIRMAN VOLCKER. The posture we are in now, if I recall it accurately, is that we have said we don't want to do this right away because of the Monetary Control Act. And, if we ever do it, we will give the banks a lot of notice and all the rest. We are seriously contemplating it but we haven't made up our mind.

MR. AXILROD. That's right. [The announcement of the Board's tentative posture] had a slightly positive cast rather than a negative cast in it.

CHAIRMAN VOLCKER. Yes. Among other things, this is a Board of Governors decision. But I'm just trying to figure out how we can advance the ball or kick the ball back in terms of what we say in connection with the Humphrey-Hawkins report. We can put a more positive cast on it and say an appropriate regulation is being drawn up, which the Board would have to agree to subsequently. We can say we are considering these other things and we plan to publish a [proposed] regulation but it's short of an absolute decision. We can put a much more positive cast on it, but we can't say we absolutely have decided on it anyway if we're going to put it out for public comment.

MR. PARTEE. We will have to publish a [proposed] regulation.

MS. TEETERS. But there was a flavor [in our announcement] that we wouldn't consider it until September.

CHAIRMAN VOLCKER. I would assume that if we began right now to consider it, we'd have to consider some of these other matters and couldn't do it short of six months anyway.

MR. BLACK. Yes, that's what I had--

CHAIRMAN VOLCKER. But we have to get comment [from] the banks and give them time to get prepared.

MR. BLACK. I think Governor Schultz has come up with a sensible suggestion for most of us. Going with what he said is all we can do for a while anyway. We could not switch to this any time soon.

CHAIRMAN VOLCKER. Well, just to pick a round number, I think we're not talking about [making a decision] before six months.

MR. BLACK. No. But in the meantime, I would favor doing what he suggested as an interim step. And if things turn out better, then maybe we don't need to do it. I have long had a bias in favor of lagged reserve accounting, but--

VICE CHAIRMAN SOLOMON. What are you going to tell your critics next year if you're going to take care--

MR. BLACK. This would be lowering requirements.

CHAIRMAN VOLCKER. We on the Board will discuss this against this background [discussion]. One possible outcome is, in effect, announcing that we are going to publish a regulation for comment and consideration.

MR. ROOS. May I make one observation? In countering what Fred said, I don't think this is a matter of our throwing everything at them at once. If you recall--and maybe I'm hung up on this--the President, the present Secretary of the Treasury, Mr. Stockman, and others coming into this Administration specifically suggested that we free interest rates and that we go to contemporaneous reserve accounting. In other words, they [listed] a number of the things we are talking about. Now, we certainly are independent of them. If, as a result of this effort today, when the Chairman goes up to Capitol Hill all we do is say that we are going to try to adjust our nonborrowed reserves a little more quickly, it will be awfully obvious to people who are aware of the several things that were suggested that we really haven't moved on any of them very emphatically. So, I think we're going to catch more flak if we merely do that one thing than be in any possible danger of being accused of throwing too much at them at once, if that makes any difference. In the minds of the financial press, or portions of it at least, as well as the incoming Administration, there are rather specific views that the two or three or four changes that we are discussing today are necessary for the Fed to conduct monetary policy in a brave new manner. And I think the omission will be as obvious as throwing in too much. This is just said in a friendly way to give the opposite point of view.

SPEAKER(?). If it works.

MR. SCHULTZ. I would remind you of the recent interview that Newsweek had with Bill Martin in which he ended up saying that he doesn't know much about monetary policy but he knows a lot more about it than most other people and he spends most of his time trying to combat simplistic solutions. And it seems to me that there are an awful lot of simplistic solutions being offered. I'm not convinced that those who are criticizing what we are doing know more about it than we do around this table.

MR. BALLE. Mr. Chairman?

CHAIRMAN VOLCKER. If I may move to item E.

MR. BALLE. Could I say just one fast word? When the Board does consider this matter, I hope it will give serious consideration to Bob's proposal. Among other things, it certainly would eliminate the frantic settlement dates that we would have under a one-week reserve period. That would greatly diminish the burden on both the Reserve Banks and the reporting banks, if we could get what are said to be the advantages of CRA. I view them as being moderately promising. But to do it on the one-month basis rather than an every week basis I think has an awful lot of merit. It certainly deserves more consideration in my view.

CHAIRMAN VOLCKER. Well, the only thing that strikes me about that offhand, without having thought it through, is that all the adjustments get delayed until the end of the month, and there would be a tremendous crunch at the end of the month. That would be worse. But we'll look at it.

MR. PARTEE. I think the Committee has had some experience with this.

MR. BLACK. But they have a one-month long lag.

CHAIRMAN VOLCKER. Next on my list is: Which target do we emphasize? We have a particular problem--and I don't know how far we can carry this outside of the specific decision we have to make about targets this year--when, for institutional reasons, we don't have as good a handle on what M1 is doing as we might like. Who would like to address themselves to this subject of which target? I suppose we could say the general question is: How many targets do we announce?

MR. MORRIS. I've become increasingly disenchanted with M1 [in its various forms] as a monetary policy target, starting back in the fall of 1978 when for six months it was giving us misleading guideposts to monetary policy. It seems to me that what we're trying to control with monetary policy is nominal GNP and that, therefore, we ought to use as our target something that is more closely related to nominal GNP. I think the broader aggregates are more closely related. So, I'm in favor of getting away from M1 because of its short-term instability--because the noise factor is so much louder in M1 than in the other aggregates. And I think the fact that we have this NOW account problem this year provides us with an ideal opportunity for chucking M1.

CHAIRMAN VOLCKER. I understand everything you're saying. M1, very recently anyway, has [not] been very closely correlated with nominal GNP. But how do you answer the fellow who says: "That's fine, but we can't control M2"?

MR. MORRIS. Well, sitting around this table today, we have heard discussions to the effect that we really don't control M1 with reserves--that we control it with interest rates. If that's the case, it seems to me that we can control M2 or M3 as well with interest rates. I am not persuaded that the broader aggregates are less controllable, in fact, than the narrow ones.

MR. WALLICH. They're mostly controllable by controlling the economy.

MR. MORRIS. Well, so is M1 fundamentally.

MR. WALLICH. You know there is the result--

CHAIRMAN VOLCKER. With M1 I think--

MR. WALLICH. I would have thought M1 had some independent impact.

MS. TEETERS. But even if we aimed for M2, our control mechanism lever is still M1. It has to be.

MR. MORRIS. Why?

MS. TEETERS. Well, if M2 overshoots the only thing we can do is lower M1.

MR. ROOS. Haven't there been studies that have shown there is a much closer relationship between the narrower aggregates and nominal GNP than the broader aggregates? May I ask that question of my friend on my right?

CHAIRMAN VOLCKER. Mr. Axilrod now tells us that one can produce a study to show anything, I guess.

MR. AXILROD. I think Mr. Davis has.

MR. MORRIS. The fact is that I asked my staff to give me a chart of M3 velocity compared to M1 velocity.

CHAIRMAN VOLCKER. Well, just to clarify this: If you just look at the simple relationship with no lags, it is clear that M2 has a much closer relationship. I think everybody would agree with that recently. But you're saying that if one makes a complicated enough equation with lags and so forth and interest rates, yes--

MR. AXILROD. Well, with regard to a predictable relation between money and GNP, the velocity of M2 has shown very little change in the last couple of years. But [the problem] gets very hard when one puts oneself in another world of controlling [M2]. Then, what are the relationships? In the present world in which we live, the interest rates that are available on the instruments in M2 move very easily with the market. They have been designed that way. When you start controlling M2 and market interest rates go up, the [depository] institutions raise their interest rates; In my mind--and I may be wrong--if we really actively control M2, I fear that we'll get much more interest rate volatility out of that than one might think. When you are looking at a world where we weren't trying to do that, M2 sort of goes along with the more moderate movements in interest rates relative to GNP that we were having. So I think it's much more complicated than just looking at the past history of these relationships. I'm probably not being clear, but--

MR. MORRIS. Well, I think I understand what you're saying. Nonetheless, the image in the public mind and in the mind of the

Congress of what monetary policy did in the last year, for example, is closely identified with the tremendously erratic jags in M1. We got some undulations in the broader aggregates, but we didn't get anything like that kind of movement. To stick with a target that has as much noise as M1 does is not a very rewarding exercise.

MR. AXILROD. May I just make one final point, Frank? I don't want to bore the Committee, but what I'm trying to say is that M2 in 1980 didn't vary quite as much as M1 did. But [what would have happened] if we had been trying to keep M2 from doing what it was doing? Then we would have had, I think, even more interest rate variability because the market would have had an easier job working to offset [our actions] because the [depository] institutions could change the interest rates on the deposits in that aggregate. If we had worked policy your way, that might have generated a lot more interest rate variability and, for all I know, a lot more money variability. The reason is that to reduce M2 growth sufficiently we would have been putting most of our pressure on demand deposits because institutions would have been raising their interest rates to get more of the other deposits [in M2].

MR. MORRIS. Well, I would be more inclined on the broader aggregates to use M3 than M2.

MR. AXILROD. Well, for either one, I think that's the issue that it tends to bring up.

MR. PARTEE. I wouldn't want to do anything too shocking about this, Frank, until I understood more about the British experience. They have had something like a 22 percent increase in M3, about twice their guideline. But M1 rose 6 percent last year, which is much more consistent with what was happening in the economy.

MR. SCHULTZ. Yes, but I'm not sure you can make that comparison, because they had--what do they call it--the corset?

CHAIRMAN VOLCKER. Yes.

MR. SCHULTZ. Well, they had some other things and I just don't know--

SPEAKER(?). Well, they haven't been [unintelligible] overshooting.

MR. PARTEE. Yes. But it's very possible that there might be a tendency for people to move out of long markets and into short markets for both borrowing and holding financial assets. It would have the effect, within the context of a particular increase in total credit, of being more in the form of M3. It could be the corset or anything else that would occur. And that would be totally uncontrollable by us. I think the only way we could control it, as Steve says, is by reducing the growth of narrow money to the point that we got interest rates high enough to have to turn them off to short markets as well.

MS. TEETERS. Steve, didn't you have an experience when you were trying out the different control measures that as you moved the control from one of the instruments to the other, in effect, what it

did was to move the variability to the instruments that were uncontrolled?

MR. AXILROD. Yes.

MS. TEETERS. So, we are not getting rid of the variability by changing our target; we're just moving it to some other instrument.

MR. AXILROD. That's what led me to try to put controlling M2 in those terms because that might be shifting whatever variability we had in M2 somewhere else, so to speak. It would be in demand [deposits] then, with possibly even more variability in M1 and, as a result, even more variability in interest rates than we are observing.

CHAIRMAN VOLCKER. Didn't I see somebody speculating on the British experience that they might have had slower growth in M3 if interest rates were lower?

MR. TRUMAN. Well, the thought there is what was referred to as "a perverse elasticity." The work that we've done on that suggests that there is not. That was something that was looked at as we were redefining the aggregates to see whether there was a sufficiently perverse elasticity. It's possible that there is some, but that has not been found yet.

MR. GRAMLEY. It seems to me, as a minimum, that we need to ask the staff to take out the components of M2 that are not in M-1B and subject them to some analysis of their cyclical pattern. What does it look like? How sensitive are those components to rates of interest and so on? There are some things that go in opposite directions.

MR. WALLICH. I think we did that once before and we found that the non-M1 components in M2 did not contribute anything to the relationship of M1 and income.

MR. PARTEE. That's right. [Unintelligible] we did in that committee you'll remember. And there was no improvement in controllability by moving from M1 to M2.

MR. SCHULTZ. When was this?

MR. PARTEE. Oh, a year or two years ago maybe.

CHAIRMAN VOLCKER. Well, we heard Frank expressing one point of view on one side. Are there those who are 180 degrees away and say we ought to forget about M2 and M3 and bank credit and so forth?

MR. CORRIGAN. Do we know anything more, Steve, about where NOW account money is coming from?

CHAIRMAN VOLCKER. Let's get into that later.

MR. SCHULTZ. Well, I don't know. Was Frank arguing that? I'm not sure I understood. Were you arguing that we ought to target on M2 and--

CHAIRMAN VOLCKER. Or M3.

MR. SCHULTZ. --M2 or M3 and that we ought to replace the single variable of M-1B that we're targeting on with another single variable? And are you going to the extent of saying that we just publish that one? If so, I can agree with you partly. I think the Kaufman idea that we need to look at much broader [aggregates] and that we need to look at credit makes some sense. But there are all kinds of problems in that. It seems to me that we can't do very much better than to target on the M-1B that we're using now and look at the other aggregates, including bank credit, as judgmental factors.

MR. MORRIS. I think 1981 is going to be a year when none of us is going to have the faintest idea what M1 really means.

CHAIRMAN VOLCKER. We'll get back to that in a minute.

MR. PARTEE. I understood Frank to say he wants to target on M2 or M3.

MR. MORRIS. Or M3.

CHAIRMAN VOLCKER. Just in terms of a more general sense of the meeting, if I detect it correctly, the view is that we will remain rather eclectic on this as a matter of principle but that some M1 measure continues to have a particularly heavy bearing as an operating matter. We may modify that in the light of the particular decision we have to make now. M1 is particularly [distorted]. But as a general principle--though we had one on one side and one on the other side--I assume everybody else is in the middle, which is the view I just attempted to express.

VICE CHAIRMAN SOLOMON. At previous meetings, I had taken Frank's position. But I've been thinking it through and I believe it's a little dangerous to target on M2 or some other broad version of [money]. I think people will still be looking at the M1 components of the M2 number. And we're still going to have to be open to much criticism. Also, I'm impressed by Steve's earlier point: It is a cumbersome variable to target because we can only operate on part of it. So, my instinct would be to go ahead and target the same Ms that we did last year and adjust the targets for the NOW accounts. We'd be publishing only the raw data and then periodically we would make a--

CHAIRMAN VOLCKER. We'll get into the specifics of what we will do [with the targets for this] year in a minute. You wanted to say something, Bob?

MR. MAYO. Yes, I just wanted to say that I think one of the brightest things this Committee ever did was to start the targeting procedure not only with ranges but with a family of targets. And this is absolutely the worst time in the ten years I've been here to abandon that and to seek, as some people on the Committee want to do, a single aggregate that is better than the others. They are only marginally better or marginally worse. [I don't care] if someone wants to say that it's cowardly to seek refuge in a family of aggregates with disparate movements and admit that we are feeling our way in this; I think that is the honest approach.

CHAIRMAN VOLCKER. Well, I think you are citing a general opinion. It's clear enough, subject to any change we have to make

this specific time because of the confusion about M1. But we'll get to that later.

MR. BALLE. Particularly in 1981 it would be pretty risky to bear down on just one aggregate. But could we perhaps consider simplifying the family? I'm not sure, for example, whether as we go into 1981 it will still be necessary to track M-1A. We know there are going to be some very massive shifts out of it because there already have been at least some. It's going to look really weird to set up a target abstracting from changes, given what may show up in reality.

CHAIRMAN VOLCKER. Let's go to that when we look at 1981. I think it's a relevant question. Anything else on the general principle? We are remaining eclectic. A question arose in the course of these studies; it doesn't need to be systematized, but somebody may want to say something about it. The staff detected, as a matter of empirical research, that the targets that the Committee set tended to move one-third of the way back toward where they were supposed to be per month. Am I expressing that correctly?

MR. AXILROD. I think that's right.

SPEAKER(?). For the long term?

MR. AXILROD. Back to the midpoints of the long-term ranges.

CHAIRMAN VOLCKER. I don't think this was consciously thought out or very explicitly thought out. I may be overstating this, but did I understand that the staff judgment that emerged, considering the implications for interest rates and all the rest, was that that did not seem, for better or worse, an unsensible way of doing it?

MR. AXILROD. That's right. Looking at the monthly money market model simulations, that was kind of a tradeoff. If you tried to get back faster than that, the assurance of hitting your long-run target wasn't all that much greater [and that needed to be weighed against] the probable increase in money market rate volatility.

CHAIRMAN VOLCKER. Well, I don't really think this requires any decision because we can always make it at any particular meeting, as we have in the past. But I thought it was interesting to convey this sense of what presumably we had been doing subconsciously. I don't know if anybody wants to raise a question about it or systematize it or whatever.

MR. BLACK. Isn't there some conflict between that and adjusting the nonborrowed reserve target to a larger extent and perhaps more frequently?

VICE CHAIRMAN SOLOMON(?). No.

CHAIRMAN VOLCKER. Well, I don't know. What do you say to that, Mr. Axilrod?

MR. AXILROD. I'd say that the first thing had to do with the Committee's targeting procedure. The second had to do with the success of hitting it, which wasn't all that great.

CHAIRMAN VOLCKER. And they weren't too closely related?

MR. AXILROD. The Committee targeted fine, but the aggregates didn't behave quite as targeted. If they had, we probably would have had more interest rate volatility.

CHAIRMAN VOLCKER. Just to rationalize those two things, Mr. Black, what we have to be saying is that it may have been logical to set the target to move a third of the way back. But we didn't change the nonborrowed reserve [path] fast enough to support the actual numerical target that we had set.

MR. BLACK. Yes, I see the distinction. I was somewhat confused on this.

VICE CHAIRMAN SOLOMON. It's rather natural that we would end up trying to get a three-month correction, isn't it, simply because of the way we look at these, which is to see where we come in at the end of that quarter and then to try to get back on path?

CHAIRMAN VOLCKER. I think that's why we did it, yes.

MR. AXILROD. Yes, there were some times when it might have been six months, but it was--

CHAIRMAN VOLCKER. I don't think we have to sit here and decide we're going to have a fixed policy or that it should be different. But apparently this was systematic enough in our unconsciousness so that it could be commented on, if anybody wants to comment on it.

MR. CORRIGAN. One of the things that bothered me about that was this: The report made the argument that we didn't, through our actions, build in a cyclical pattern of money [growth]. That is, the things that we did didn't create their own cycle. I just had some trouble rationalizing that three-month lag, [given] the very low interest elasticity of money demand in the short run, with the conclusion that the practice itself didn't help to generate the cycle. If we only adjust--

CHAIRMAN VOLCKER. Well, the thing that bothers me the most, as just a simple observation of last year, is whether we were generating a cycle. That is the question we're now raising. And when I don't probe too hard, the staff tells me that we weren't. But I don't know whether I feel comfortable with that.

SPEAKER(?). I don't.

MR. CORRIGAN. Again, those two things, the one-third type reaction coupled with the very low short-run interest elasticity of money demand, seem to me to reinforce the casual observation that maybe we were creating--creating is too strong a word--contributing to that cycle of money growth itself.

MR. FORD. Well, what's the alternative policy?

MR. AXILROD. We ran [the model] a variety of ways. If you run it holding money growth constant so there's no cycle, you tend to

get some cycles in interest rates. That's possible. But if you tend to hold interest rates constant, you might get some movement in money growth related to GNP. But we didn't succeed in getting cycles in both, if my memory serves me.

MR. CORRIGAN. Let me ask the question differently. I only saw the summary; I'm not sure what you drew the conclusion from. Is that where you were going?

MR. AXILROD. Which [conclusion]?

MR. CORRIGAN. The conclusion that our own techniques didn't in some sense create or contribute to the cycle of money.

MR. AXILROD. [There was a] sharp drop in money in the second quarter; the models would have projected a higher amount of money in that quarter--much more money--even with the weakness in GNP. So we interpreted the sharp drop in money, even at the interest rates that developed, as reflecting a sharp drop in money demand at that point. We weren't creating the money demand; that was the public's reaction to what interest rates [were doing]. The San Francisco interpretation puts much less stress on the sharp drop in money demand and would stress instead that there was a temporary deviation in money supply in some sense because everyone was paying off loans. And viewing loans as a supply, the amount of money dropped. They wouldn't tend to interpret it as money demand. But again, there was an exogenous factor, that credit control program, unrelated to our operating procedures. The big variations were coming out of that. And that's essentially the basis for saying that.

MR. CORRIGAN. Let me ask the question differently, then. In any of that material, was there an effort made to estimate the lag between, say, a change in the nonborrowed path and its ultimate impact on money? [Was there any analysis of] how long that process takes?

MR. AXILROD. I'm not sure. I did ask the question: If we held the nonborrowed path, however constructed, and put in more money, however that comes about, which gets more borrowing, would we ever get back to the path? I don't know whether you're asking that question.

MR. CORRIGAN. No, it's a slightly different one.

MR. AXILROD. The answer to that is: No, we don't get back to path. We would have to lower the nonborrowed path.

MR. CORRIGAN. That's the question I'm asking.

MR. PARTEE. The question has to do with the lags. The question is: What is the lag structure from a change in monetary policy to the effect on observed money supply? I think that's what Jerry is interested in.

MR. CORRIGAN. Yes.

MR. AXILROD. Well, again, that has to be answered somewhat indirectly. Working through the money market model, which has explicit interest elasticities and demand for money and lags, if you want to hit that total reserves badly enough in a one-month period,

and you're running a couple of hundred million ahead on total reserves, meaning you're running ahead on money by whatever the multiple is--10 or something like that--then you've got to lower the nonborrowed reserves a heck of a lot more than \$200 million if you want to get on path that week. I've forgotten the exact numbers that I got out of this; I got them a year ago October when we started this and kept getting them lately. That month you've got to lower them, say, \$1 billion, because you get an offset in borrowing of \$800 million or something like that, even under contemporaneous reserve accounting. So you generate massive interest rate pressures. Now, we don't have evidence that if you generate those massive interest rate pressures, you're going to start cycling money. Our evidence is pretty clear that you'll get interest rate cycles or interest rate up and down movements, but not money cycles.

MR. CORRIGAN. That's where I get stuck. I don't see how you can get the up and down interest rate movements without in turn getting an up and down movement in money, because the interest rates presumably are what cause the--

MR. AXILROD. Well, that's a technical question. The lags are, on average, six or seven or eight months at the longest and [most of the effect is] done in about three or four months. You have to start comparing the effects of this month's drop in interest rates given that [sort of lag]. It takes most of its effect three or four months from now.

MR. CORRIGAN. I'll have to look at that paper.

MR. PARTEE. My [memory] is that it could be four, but maybe a little more vigorously--

MR. CORRIGAN. My instinct, though, is that the way we operate could very well produce those results.

CHAIRMAN VOLCKER. Well, one of the things that continues to concern me a bit about this is this simple relationship, and maybe Mr. Ford can enlighten us about it, that we're attempting to control the economy through bank service charge practices. Corporations hold a large percentage of the money supply; their required balances are related to their activity in the prevailing interest rate [environment] with an indeterminate lag of several months. We push up interest rates; the banks all send out notices to the corporations that they can keep lower balances next month. Interest rates go down, so the money supply declines. And because interest rates have gone down the banks send out notices to their customers that they now have to keep higher balances.

MR. FORD. There is that perverse dynamics. Are you asking whether, as the interest rate cycle evolves, bankers change the balance requirements? Is that the question? Sure they do.

MR. PARTEE. How fast do they do that?

MR. ROOS. No faster than they have to.

MR. FORD. Oh, heavens. That varies so much from bank to bank.

CHAIRMAN VOLCKER. The saving grace here is probably that the bank practices vary in this respect enough so that it doesn't have any cyclical movement to it.

MR. FORD. For a long time, the Fed did a survey of lending [practices] and it supposedly covered that. When you read the results of those surveys and talk to corporate lending officers and listen to the policies dictated to them by their senior managements, there's a vast [unintelligible]. You learn nothing from the survey. What you have to do, actually, is an audit of collected balances--not just what the bank says the corporate customer has to have but what it actually is getting out of the corporate customer. I think it would show, as Paul suggested, that when things get tight the bankers try to come down on them harder. But as for how much they do, I've never seen any good evidence for all the banks. I know how it works in two or three banks that I'm familiar with, but not all of them.

MS. TEETERS. Steve, actually, we were trying to get back on the path in two specific instances. One was the drop in April; and then we were moving back up to the path over a three-month period. The other one was the ratchet up in July--or August, I guess. We were reacting mainly to two almost discrete occurrences. Did that in any way affect the rate at which we tried to get back? It's not as if we continuously drifted off in one direction or the other. We just took some tremendous ups and downs that we were trying to correct.

MR. AXILROD. Yes. Well, it affected our deviation, I think. That is, we were so far off a couple of times that it made our average deviation bigger than it otherwise would have been. I don't remember exactly how the Committee targeted in those periods; I don't remember whether the goal in that period was to get back fast--

MS. TEETERS. As I remember it, you gave us the option of getting back in three months or getting back in six months.

MR. AXILROD. That's right. And I just don't remember how it came out. But the misses there certainly affected our average absolute deviation. The year was very much affected by those two occurrences. Another year may not be. We might end up looking a lot better in another year because of that.

CHAIRMAN VOLCKER. Henry has raised a question of publishing the directive, which was not on my agenda. But do you want to make your case, Henry?

MR. WALLICH. Well, we're under challenge to prove that we're sticking by our guns. It seems perfectly obvious to us that we are. We announce our targets a year ahead; we meet only every five or six weeks and we then publish a record so anybody who wants to inform himself can see clearly that we haven't changed our targets. Nevertheless, if you read the market reports--I try to read as many as I can and the most troublesome that I know of is Eric Heineman's of Morgan Stanley--they continually say that the Fed once more has given up on inflation. Three months later he finally discovers that the Fed seems to have decided that they will fight inflation after all. That sewage flows into the--

SPEAKER(?). Remember, we can't go back to--

MR. WALLICH. How do we prove that we haven't changed our mind?

VICE CHAIRMAN SOLOMON. Do you think he'd write a different newsletter if we did publish [the directive immediately]?

MR. WALLICH. I think somewhat different, yes. For one thing he always uses existing material, including our policy record and the discount rate proceedings in full detail. He reprints them to fill about half of his letter. And he's not the only one who for need of something to write says that the Fed doesn't know what it is doing, or doesn't know what it wants and changes policy almost continuously. I think we could do something to defuse that. I recognize that the cost of this is quite considerable. For one thing, we might get much more of an immediate reaction from the Congress, for instance, to anything that looks like a rise in interest rates. For another, it's only on this technique--if we don't emphasize interest rates--that we can publish immediately. Under the old technique, with [emphasis on] the federal funds rate, we would have tipped off the market on what we were going to do over a month and the market possibly would have taken it to the next stage. That danger still exists with a [federal funds rate] band if they see the band is not now 12 to 18 percent but 11 to 17 percent. They might say the midpoint has moved and so the funds rate is going to move and they might do that right away. So, I see a considerable cost, but I still think it's worth considering, and I lean toward doing it.

MS. TEETERS. Even on the funds rate, Henry, they found [what our new rate was] by noon on Wednesday [after the meeting] anyway.

MR. WALLICH. Some [did].

MR. PARTEE. Henry, the last time we published, we had a directive that specified a funds rate range of 15 to 20 percent, I think. And when we did that, I've forgotten just exactly where the actual funds rate was but it was right close to 20 percent.

MR. STERNLIGHT. It was about 19-1/2 percent.

MR. PARTEE. Now, what do you suppose would have been the effect (a) on Eric Heineman and (b) on the market if that afternoon we had published in the Committee's directive a funds rate range that has 5 points of downward room in it but no upward room at all? I think you'd get the same story from Heineman in spades. And I think the market would have assumed--I'd say it's like shooting fish in a barrel--that the funds rate wouldn't go over 20 percent and it could only go down. That would have had an effect on all the variables. Whether it would have been good or bad, I don't know. But publication of that particular directive would have had an effect.

VICE CHAIRMAN SOLOMON. I wish to reinforce that. The market participants whom I respect the most are saying that it's important to maintain uncertainty in the minds of the market participants to the maximum degree possible. They say that the Fed move to a 6-point band created a healthy tone in that market. I agree with Chuck that there are times when we'd be publishing a fed funds range that would reduce that uncertainty, and I think that would tend to produce unfortunate

results in the markets. In a certain sense it would focus more attention also on the fed funds rate band if we published immediately.

CHAIRMAN VOLCKER. Certainly, once we began doing that, we couldn't stop. And if we ever wanted to put something in the directive such as some qualified statements about if this happens something else might happen later on--as we did last month, though not on the federal funds band--

MR. PARTEE. I just think there are times--I've seen them periodically--when we want to put a constraint on [interest rate movements]. And if we had to announce that constraint right away, I think it would hurt.

MR. MORRIS. Also, when we have conference call meetings and raise the rate, presumably we would have to announce that immediately, too, which is--

MR. ROOS. Well, just so that Governor Wallich isn't left to drift alone, I agree fully with what he says. I think there is much unnecessary volatility in the financial markets as a result of some perceived signal from the Fed that it is going to do something that it indeed isn't going to do. The more we tell them and the more we play our cards openly, the better everybody will be able to adjust to what we're trying to do. So, I would endorse what you said, which may have eliminated the last vestige of success for it, Henry!

SPEAKER(?). [Unintelligible] chance of success.

MR. WALLICH. Well, look at what other central banks do.

SPEAKER(?). He said "Roosfully."

MR. WALLICH. We are very much on the defensive. We operate, as it were, trying not to show our hand. The Bundesbank, which is a very strong central bank, calls a press conference every time they've done something worth talking about. They explain very clearly what they are doing.

VICE CHAIRMAN SOLOMON. [Unintelligible].

MR. WALLICH. Well, it has worked well for many, many years. And I don't think it has to do with their present problem. They're not afraid of their government and they're not afraid of their legislature. And they do inform the market.

MR. PARTEE. How could that be?

MR. WALLICH. Well, I guess they are an independent central bank.

MR. FORD. I don't really understand the notion that uncertainty is desirable. I always thought when we were discussing volatility in long-term rates before that we said uncertainty compounds volatility; it is an economic cost. It has to be either that uncertainty is bad or it's good. I think it's bad.

VICE CHAIRMAN SOLOMON. Uncertainty in markets' behavior is absolutely a sine qua non. Take the foreign exchange markets. If you don't have people betting on both sides, you're going to have [in]stability in markets or movement in one direction. Now, if you're going to have a government controlled market, fine. It seems to me that that is not what you're talking about.

MR. WALLICH. Well, there's a difference between uncertainty and ignorance. You want to give the most information, but it will still leave the distant future uncertain.

MR. PARTEE. Yes, but you do have to have two-way markets. Without differences of opinion, you will have no markets. I think that's what Tony was referring to.

MR. WALLICH. Yes, but these might both be well-informed opinions. They could still end up being different.

MR. BLACK. Henry, if we had contemporaneous reserve accounting and no limit on the federal funds rate, I'd be with you 100 percent.

MR. PARTEE. Yes, I think that makes a big difference. To tell with no constraint on federal funds rates--

MR. BLACK. [With no such constraint,] we really wouldn't be telling the market anything. They would know as much as we know; we wouldn't know which way rates--short-term rates anyway--were going to go on that basis.

CHAIRMAN VOLCKER. I detect no upsurge toward a majority for this opinion. The last question I have here is a similar one, which we certainly don't have to resolve here. It's not the responsibility of the Committee, but I wonder where opinions stand on publishing the money supply data. I got a letter from Senator Garn and Senator Proxmire the other day raising the question of whether we shouldn't stop publishing weekly figures.

MR. MAYO. We can't do it under the Freedom on Information Act, can we? Period.

MR. MORRIS. We can if we switch to M2 and M3 because [we don't have weekly data].

MR. PETERSEN. We can stop publishing the data; we could not resist a specific Freedom of Information Act request for the data if they are compiled and used. But there is no requirement to publish them.

MR. SCHULTZ. And in fact we'd get [requests].

MR. MAYO. Well, that's dancing on the head of a pin. If it's there, it's there.

MR. PARTEE. There would be a delay, though.

MR. FORD. Well, maybe for a time we don't have to compile the data for the public.

CHAIRMAN VOLCKER. And presumably we could ask Congress to change the law if they thought seriously about it.

MR. FORD. That's what you're asking? Is that what they're asking us? Do we want the Act changed?

CHAIRMAN VOLCKER. No, they didn't specifically ask that. I forget whether they made any reference to it or not. They made some reference to the fact that they understood there might be a question under the Freedom of Information Act. I think that is the way they worded it. I don't think they volunteered to change [the Act], but they didn't say they wouldn't.

MR. MAYO. Send them back [a request] to change the Act.

MR. MORRIS. That would be one of the advantages of switching to the broader aggregates where we don't have weekly data.

MS. TEETERS. But they'd still request them.

MR. MORRIS. We don't have it.

SPEAKER(?). It would cut down the reporting [burden].

MS. TEETERS. But we can't stop collecting it.

CHAIRMAN VOLCKER. It has occurred to me--though I'm not ready to propose this yet--that we may have legitimate grounds for not publishing seasonally adjusted figures because the seasonal adjustment factor is so bad. We would tell the public that we don't trust it and we're not going to--

MR. GRAMLEY. We cannot create one internally without also making it available under the Freedom of Information Act.

MR. PARTEE. Let's do away with it since it's no good.

MR. GRAMLEY. Well, that's fine. But then we probably will have to go to Frank's procedure of targeting on M2 because we won't have anything that is a weekly number.

MR. PARTEE. How about successive estimates of the monthly seasonally adjusted numbers?

MR. MAYO. That's the bureaucracy at work. Our alternative then is to publish a new set of figures on our evaluation of noise.

CHAIRMAN VOLCKER. I won't prolong this any further.

VICE CHAIRMAN SOLOMON. In the staff material I think there are some good comments on that. They point out that if we publish the raw data, without the seasonal adjustment, everybody is going to be making their own seasonal adjustments. And then they're going to be watching other things to get a clue as to what Fed policy is and will pay more attention to the fed funds rate.

CHAIRMAN VOLCKER. There is no question about that. Mr. Kichline.

MESSRS. KICHLINE, ZEISEL, and TRUMAN. [Statements--see Appendix.]

CHAIRMAN VOLCKER. Thank you for your happy comments. I think we ought to discuss the outlook, probably for most of the rest of the time we have [left today] anyway. In that process, you will recall that you recently provided some [individual] forecasts, which presumably will have to be summarized for the Humphrey-Hawkins testimony. Not all the assumptions were the same on the monetary side. I forget: What have we done in previous years about getting commonality in the assumptions if not the forecasts?

MR. KICHLINE. We did not [have uniform assumptions]. You're asking in terms of this exercise?

CHAIRMAN VOLCKER. Yes. We didn't [specify] any assumptions I don't think. Did we ask people when making their forecasts to use the same assumption or not?

MR. KICHLINE. We specified the midpoint of the ranges. On this one we asked that the forecast be accompanied by a statement as to what the assumptions were. So, the assumptions did vary.

MR. SCHULTZ. We have given [Congress] a Board forecast in the past.

CHAIRMAN VOLCKER. We gave them a forecast that [generally encompassed] the views of the [individual] Committee members. But I can't remember whether we asked everybody to make a forecast on the basis of the same monetary and fiscal assumptions.

MR. PRELL. Last time was the first time that the entire FOMC participated. We asked for forecasts on two bases: in terms of fiscal policy assumptions and with the basic money stock assumption we ultimately [adopted]--

CHAIRMAN VOLCKER. So everybody presumably had the same money supply assumption?

MR. PRELL. Presumably.

MR. SCHULTZ. Not this year.

SPEAKER(?). It was different this year.

CHAIRMAN VOLCKER. Well, in these preliminary forecasts [the assumptions] were different anyway. I just don't know what the right procedure is here. It's logical for everybody to use the same assumption. But if somebody violently disagrees with the assumption, it seems a little artificial to force that person to use it.

MR. PRELL. Well, in terms of the basic thrust of the Humphrey-Hawkins exercise, the assumption might relate somehow to what we thought the Administration economists were going to do with fiscal policy, which leads one to various indeterminate states at this time. But there's nothing we can do that is going to be clean-cut in terms of the overall purpose of the [exercise].

MR. WALLICH. Well, it seems logical that one should make as good a judgment as one can. And that really implies also as good a judgment as one can of the policy outcome, not the policy intentions. The forecast here in the Greenbook is severely constrained by what may well be an unrealistic outlook. And we have a chance here to be as realistic as we can.

CHAIRMAN VOLCKER. Well, that's the dilemma, and I'm not quite sure how--

MR. PARTEE. Well, not for reporting under Humphrey-Hawkins. You certainly don't want to be all that realistic, do you?

MR. WALLICH. I try to be realistic.

MR. PARTEE. Really?

MS. TEETERS. Conversely, the Greenbook may be [biased] by unrealistic assumptions on money.

CHAIRMAN VOLCKER. Well, all I would say at this point is that we have a considerable amount of time before we have to publish this, and we haven't even decided what we're deciding. Maybe we can defer that question until after the meeting tomorrow and then ask if anybody wants to redo their forecast; perhaps we can at least narrow the range of assumptions from what we have.

MR. KICHLIN. I would note that the forecasts in the Humphrey-Hawkins report would naturally be related to a range on the monetary aggregates. So there is room within a range concept to accommodate, I would think, a large number of the members of the Committee.

CHAIRMAN VOLCKER. I suppose that's a reasonable compromise: To ask people to make assumptions that are at least within the range of what the Committee is talking about.

SPEAKER(?). Especially if you're going to be called--

CHAIRMAN VOLCKER. We have a summary here of all your forecasts, which could be distributed after the meeting for whatever use it may be. But we will not consider this a final forecast until we complete our work. Who wants to talk about the outlook? Mr. Boehne.

MR. BOEHNE. I agree with the staff forecast in general. But it does seem to me, as one goes about talking to people, that there are some real disparities in peoples' outlooks and I think that has some implications. For example, a majority of businessmen even in the Third District, which has been an area of slow growth, are really much more optimistic than this forecast. [That includes those in] high technology, energy development, business services and that kind of thing. On the other hand, if you talk to businessmen who are doing very, very, poorly--those in auto and auto-related industries, small businessmen who have to finance inventories, and thrift institutions--[it is quite different]. While we have been used to regional disparities, it seems to me that the disparities among business types are much sharper and much stronger than in previous recessions. And I

think the true picture of the economy is quite different. If we have this outlook of slow speed ahead, on average, I think we are going to have a minority of businesses that are really going to be pushed to the wall, even though on average it looks as though we're just going slow speed ahead.

CHAIRMAN VOLCKER. I think that is a relevant comment, that we have a two-tier economy or something. Half of it you can't keep down and the other half is in depression. I don't know what to do about it. It makes it more difficult [for us] for the very reasons you suggest.

MR. RICE. It's consistent with low, slow growth.

CHAIRMAN VOLCKER. Well, it may be consistent with low growth overall, but the pressures, financial or otherwise, [are concentrated] on the half that isn't doing anything--even now.

SPEAKER(?). [Unintelligible] the stock market.

CHAIRMAN VOLCKER. Who else wants to comment? You're all speechless!

MR. SCHULTZ. What were those permits figures, Jerry?

MR. ZEISEL. They were down 24 percent. Do you have that number?

MR. PARTEE. Is that all?

MR. KICHLINE. They were down 24 percent in January; this is based on the first two weeks of data and it's a sample. There is a good deal of disparity between single-family and multifamily. As you may know, the multifamily starts have been exceptionally strong recently but in January permits for multifamilies declined 39 percent and for singles 14 percent. So it's quite weak.

MS. TEETERS. Permits are at what--around 900,000?

MR. ZEISEL. 940,000.

MR. KICHLINE. 940,000 compares to 1.2 million in December.

CHAIRMAN VOLCKER. Mr. Corrigan.

MR. CORRIGAN. Well, looking at this array of numbers here, I see that I am very much on the high side in terms of [the forecasts].

MR. PARTEE. The Minneapolis Bank is--

MR. CORRIGAN. The Northwest is getting to me, I guess! My projection is on the high side and may be the highest in terms of real GNP. I'd like to have a nice, scientific, neat explanation as to how I arrived at that conclusion, but I don't. Basically, a lot of what I have put into my own forecast does reflect quite strong growth in the second half of the year, keyed to the assumption that there will be a major spending cut that has a strong and positive psychological effect coupled with the tax [cut] programs.

MR. SCHULTZ. We understood rational expectations in the--

MR. CORRIGAN. That's not rational; that's irrational, I think. But that's the catalyst in terms of the forecast as I have put it together here. Obviously, with the kind of forecast I have, the weight of risk is on the down side. And we do have many of these vulnerabilities in the financial system and not just in the thrifts in my mind. I'm still not sure where we're going to be on oil prices. What is your [estimate] of the average oil price for 1981, Ted?

MR. TRUMAN. The average is \$38.

MR. CORRIGAN. That's the annual figure?

MR. TRUMAN. Right. Most of it we get, as I said, in the first part of the year. So, we will be essentially at that point by midyear.

MR. CORRIGAN. Anyway, we have all those risks that we've talked about before. The other side of the coin is that, whether it's housing or autos or just about anything you can think of, there's a tremendous residual of underlying demand, if we can ever get the right conditions in place where the right kind of demand can flourish rather than be suppressed and frustrated as a lot of it is now. But in a nutshell, basically the driving force behind why my numbers are on the high side is my assumption about fiscal policy and the way that's going to affect the psychology in the short run.

CHAIRMAN VOLCKER. Mr. Morris.

MR. MORRIS. Our forecast for the year as a whole is not so much different, but it's different in shape. That is, we're more pessimistic for the first half. Sitting here a year ago, we had all this financial restraint in place and we were wondering when we were going to see some response. When we did get a response, we got a pretty big one. I don't think it's going to be that big this year; I think we're close to another peak in economic activity, with a shallow recession coming in the first half. That's what I would look for.

CHAIRMAN VOLCKER. Governor Teeters.

MS. TEETERS. When I looked over the staff forecast, what really struck me most was how sensitive it was to the inflation rate. Given the monetary assumptions that we adopted in July, we already have the velocity to a point that if there's any increase in inflation over what the staff is forecasting, real growth could shoot down to the point where it is negative all year long. It seems to me that if there is any risk in this forecast, it is that we'll get more inflation and a comparable decrease in real growth. So, we could have a year-long recession based on the types of assumptions we're making. That would indicate to me that instead of trying to lower the monetary target ranges, which we just barely got within [last] year, that we'd be well advised to stay with the ones we had this past year and try to come in at the center of them rather than to lower them progressively and run what I think is an increasing risk of missing them on the top side. My forecast--I'm obviously the bottom one among the governors--is that we're going to have less real growth and somewhat more inflation. And [my view is] that we probably won't have higher

interest rates either or we'll miss our monetary targets for the rest of the year.

CHAIRMAN VOLCKER. Mr. Balles.

MR. BALLEs. Well, I guess differences of opinion make stock markets, horse races, and forecasts. I lean toward the side of being a little more optimistic than the Board staff, showing a bit more real GNP growth and a bit less inflation for the year. But [the differences] are certainly within the normal range of judgmental things that have to go into these forecasts. I was mainly interested in asking Jim what he would consider the greatest point of vulnerability in this forecast. Do you share my misgivings about any forecast now in view of the ongoing uncertainties about the new Administration's economic program and what it might do both on the spending side and the tax side? Is this forecast of yours, for example, very sensitive to significant changes in the tax rates or [government] spending levels? I don't know myself how to do a solid forecast in view of those uncertainties.

MR. KICHLINe. Well, we've done a number of simulations and experimented with the impact of alternative fiscal policy assumptions, assuming the same rate of growth of M1. In general, [much hinges on] whether you take an approach that incorporates the three stages of the Kemp/Roth bill, which we have not assumed--we've only taken the first one. If you assume that expenditure control [presents] a bit more difficulty to the Administration and they don't meet the targets that we have assumed in the forecast, the result is somewhat more real growth, but not a great deal more, in part because of this intractable inflation problem. If you hold the same money growth path, interest rates get kicked higher and some other expenditures get squeezed out. Of all the experiments--and I think one can argue about the interest rate pattern--we get somewhat more real growth, but what we're talking about is a plus or minus 1 percent at an annual rate, so it's not a big difference. I would say that one of the areas in this forecast that is clearly very uncertain is the fiscal side; one can very much argue about the expenditure cuts that we have in the forecast or about what will happen to defense spending, the size of the tax cut, etc. And it does matter. But given where the economy is and with the level of interest rates that we have, our own analysis suggests that potential demands in the private sector are very strong but are being restrained. If you dump in a more expansive fiscal policy and you get higher interest rates, that squeezes out some private funds. That does not kick up the economy to significantly higher real rates of growth.

MR. BALLEs. The one thing that I find rather scary is the possibility that the tax reduction will come well in advance of the expenditure cuts, if the cuts come at all. On that matter, the very first chart in the final set of charts that you presented shows federal borrowing relative to GNP. Could I just ask whether the assumptions underlying the lower half of that chart assume tax cuts and expenditure cuts or what? And does it include the off-budget items?

MR. KICHLINe. That includes Treasury borrowing, which would include financing the unified budget as well as the off-budget items. It does not include federally sponsored borrowing; it's just the

unified and off-budget items. It's consistent with what we have built into the forecast. In 1982 we would be running with a deficit of about \$80 billion on the unified budget; you'd have to add about \$20 to \$23 or \$24 billion for off-budget items. For Treasury borrowing that's in the area of financing more than \$100 billion in 1982. But that does imply significant expenditure restraint.

MR. SCHULTZ. I noticed that Dr. Burns in his testimony to the Budget Committee added in several other things; he added in the guaranteed borrowing of those agencies that are federally sponsored. Could you have somebody give us a breakdown on that as to what goes into those categories and what your estimates are? I noticed his estimate was around \$141 billion.

MR. KICHLINE. You're talking about right now?

MR. SCHULTZ. No, no. I didn't mean right now.

MR. KICHLINE. Well, the one difficulty in this area is that there are obviously many ways to calculate federal borrowing requirements and what the impact will be on markets. One can throw in the federally sponsored agencies--for example the Home Loan Banks, the Federal Land Banks, and Banks for Cooperatives. In our flow-of-funds accounting here we view those as financial intermediaries. We can go through this and give you alternative calculations. We can get the size of the borrowing lower or much higher. If you throw in the financial intermediaries for the credit side of the budget, you get very large numbers.

MR. MAYO. Especially if you put in the guarantees, which are obviously in our private sector.

MR. KICHLINE. Oh, yes.

CHAIRMAN VOLCKER. Mr. Roos.

MR. ROOS. We basically came out with more optimistic results practically all across the board. We are in the outlier category in some instances, but I think our deviations were essentially based on the 5-1/2 percent M-1B assumption used, rather than a lower monetary growth assumption apparently used by the staff and most of our colleagues. So, if we look more out of line than usual, it's because of that, and after tomorrow's meeting we will try to adjust it accordingly.

CHAIRMAN VOLCKER. You did have a little higher, but not terribly high, M-1B assumption compared to the staff. You have a low price number. Does that mean that your [forecast] suggests that the restraint that has already been exerted plus [restraint for] another few months produces lower prices?

MR. ROOS. This is essentially the product of our model. This is what it spewed out and I'm merely parroting to some extent.

CHAIRMAN VOLCKER. In your model, prices ought to begin going down some in terms of their rate of increase.

MR. ROOS. Yes sir, even at a 5-1/2 percent M-1B growth rate we would see that rate of reduction because that [rate of] growth would be a significant reduction from the 6-1/2 to 7 percent growth rate of this year. In fact--I guess we'll discuss this tomorrow--we think that a more abrupt reduction from the rate of aggregate growth that occurred during 1980 could bring much more severe shocks to the real economy. Even on that basis of 5-1/2 percent we are more optimistic in terms of the price level reduction.

CHAIRMAN VOLCKER. Who is next?

MR. WALLICH. Well, I made my projection on the expectation of some overshoot of M1, whichever we choose, because while a shift in the demand function is perhaps probable, it may not be so large and it certainly is not assured. Even so, I think it will imply very considerable restraint. We wouldn't overshoot unless interest rates were pressing us very hard, so I arrive at a rather adverse conclusion on the real GNP. On inflation, traditionally we have undershot our probabilities. So, given that during the year some bad things surely are going to happen--more food problems, more oil problems--and no good things, one has to expect not a further rise in the CPI but probably a rise in the deflator. On unemployment, although it's a very unhappy projection to make, I think unless unemployment is high, price increases aren't going to slow and wage increases aren't going to slow. We have no magic way of getting from a low growth of the money supply to lower wages and lower prices, except via low capacity utilization and high unemployment; and, of course, that in turn is achieved by high interest rates. These all are very unpleasant things to contemplate and that's why I decided I'd put them down. I think I am among some of the excluded outliers here.

CHAIRMAN VOLCKER. You prefer to have a lower target and overshoot or a higher target? What is the implication?

MR. WALLICH. I would rather have the lower target and at least have a chance of making the right effort. But I would remind the Committee that we probably will have base drift. I don't know what we're going to base the range for 1981 on, presumably on the fourth quarter of 1980. If so, I have the impression that that includes for all but M-1A base drift of about 2-1/2 percentage points. Now, that's a very substantial step-up. Maybe I've done my numbers wrong, but I think we have to add that to the level of the aggregates as stated over the year in order to see what they really would be if we had started a year ago--that is, at the end of 1979.

CHAIRMAN VOLCKER. Governor Gramley.

MR. GRAMLEY. I don't have any basic disagreement with the staff projection. But if you look at what is likely to happen over the course of the four quarters this year and to fiscal policy in the latter half of the year, it seems to me that we face the real possibility that aggregate demand in the latter half of the year will be considerably stronger than the staff anticipates, at least in nominal terms. And that will put considerably more pressure on prices and considerably more pressure on interest rates. I say that because if you look at the staff projection of the high employment surplus or deficit, it switches from a \$19 billion surplus in the first and second quarters to a \$22 billion deficit in the third and a \$14

billion deficit in the fourth. In other words, virtually all of the effect of that fiscal policy on the tax side goes in immediately but the effect of the budget restraint is much delayed. Of course, what will be happening at that point is that no one will really know whether these intentions on the expenditure side are in fact being realized if the tax cut goes through. So, I could be one of those outliers at this table on the price side. I think we're going to be looking at a GNP deflator that has not shown any signs of deceleration during the course of 1981 and a CPI which might well be accelerating again as a consequence of the effects of both rising interest rates and some pickup in economic activity. At some point during the course of 1981, we're going to have to ask ourselves how long we can stick with a policy posture that is simply not doing any good whatsoever in bringing down the underlying rate of inflation because the fact of the matter is that what we have done so far has done no good at all. I'm not saying we ought to quit, but I think we as a Committee are going to be facing a very, very grim set of economic statistics with no real hope that the underlying inflation rate is going to improve.

CHAIRMAN VOLCKER. You say it has done no good at all. Are you excluding the possibility that [our policy] prevented it from getting higher?

MR. GRAMLEY. No, I would certainly agree with that. It has prevented the underlying inflation from accelerating. It would be somewhat higher today--not much, but somewhat. It moves glacially, not in large amounts. And if we like, we can take credit five years from now for preventing the underlying inflation rate from having gone up to 15 percent instead of 12-1/2 percent. But if the unemployment rate at that point is 10 percent or more, I'm not sure how long we can persist.

MS. TEETERS. How do we know five years from now?

CHAIRMAN VOLCKER. Are there any more optimistic comments?
Mr. Winn.

MR. WINN. The forecast falls out from our model and I think the question we need to ask is: How good are the assumptions? One of them, as I understand it, is that you have assumed that there is no real change in the international situation. I'm not sure that's a fair assumption, although I'm not predicting as Henry is that it's going to fall apart on us. But that's one assumption. Second, I think we've overlooked a rather basic change, which Ed Boehne referred to, and that is the change in psychology that has occurred in the last month, which may turn out to be false expectations. I would mention the fact that advertising sales are really quite high. The television chains report that they have sold out for the first quarter, which is really a rather surprising development given the pessimism in certain areas. That has been a pretty good leading indicator in the past; it may not prove to be this time. But if you talk to business people whom you would expect to be distressed and depressed, they're fairly optimistic. Whether this is based on the psychology of a change in government and what is going to come out of that, and if it doesn't quite work out that way we will get disappointment in reaction, I don't know. But the first half of the year could turn out to be a lot stronger than any of us expects. Automobile sales could be stimulated by the [higher] energy costs rather than depressed, for example. So,

I think one could make a case for a somewhat stronger outcome than the model.

CHAIRMAN VOLCKER. You know, we have a certain bashfulness today.

SPEAKER(?). We're weary.

MR. SCHULTZ. Humility has set in.

VICE CHAIRMAN SOLOMON. When you give the Humphrey-Hawkins testimony, do you have to say anything about what we expect the public sector borrowing requirement or the unified budget deficit to be in fiscal 1981-82? Do you explain that as one of your assumptions?

CHAIRMAN VOLCKER. Oh, not very rigidly anyway.

MS. TEETERS. But you're likely to be asked.

VICE CHAIRMAN SOLOMON. The Reagan Administration so far is talking about a \$29 billion unified budget deficit for fiscal year 1982.

CHAIRMAN VOLCKER. But that's all based upon a much more optimistic business outlook.

VICE CHAIRMAN SOLOMON. Exactly. They have 3-1/2 percent growth in real GNP. I think you are going to get yourself into a very strange situation there because one has to make some really heroic assumptions to get [the deficit] down [to that level]. In fact, I think real GNP growth at 4 to 4-1/2 percent is needed to get that and one has to assume that inflation is down substantially.

CHAIRMAN VOLCKER. Well, I don't think the general problem will be one of estimating the budget; it just falls out. But we don't have to make a forecast for 1982. If we accepted the staff forecast, we're certainly going to have a difference between our forecast and the Administration's.

MR. PARTEE. You don't think they'll project an \$80 billion deficit?

CHAIRMAN VOLCKER. I don't think they'll project whatever we have for 1982 in the forecast we just heard.

MR. PARTEE. It's \$81 billion.

CHAIRMAN VOLCKER. No, I'm thinking of the GNP. Do you have a comment on the outlook beyond that?

VICE CHAIRMAN SOLOMON. No, our view is not that different. I'd say it's a little on the gloomier side. But I would agree with Lyle that we're unlikely to get any improvement in the rate of inflation unless we see some unexpected developments in fiscal policy, to a degree that I don't think is realistic.

CHAIRMAN VOLCKER. By unexpected developments you mean what? No tax cut?

VICE CHAIRMAN SOLOMON. No, I'm not talking about the receipts side; I'm talking about the spending side. I'm sure we'll have a tax cut. But I can't conceive that even by fiscal 1982 we will have the kind of spending cuts that will change expectations and interest rates [unintelligible] of the nominal GNP that our monetary policy [unintelligible]. So, I don't see anything but a long slide ahead. On the other hand, it may very well be that after another year or so of this, the Administration will accomplish a little [unintelligible]. I think the fallout of all this, in terms of a recommendation for the targets, is that the amount of flak we would get if we didn't go ahead with a 1/2 point reduction [in the M1 ranges] would be enormous; and we live in a [unintelligible] type world. None of us knows exactly what the results of this would be, so I don't think we have any real alternative, even though I think Lyle is right that we're not going to be able to show, at least in the next twelve months or so, any reduction in the rate of inflation.

MR. SCHULTZ. Well, the critical thing here is that it is absolutely clear that monetary policy [alone] just can't do this job. If we don't hold on to the monetary aggregates, inflation gets worse; if we do hold on to them, all we do is put all the pressure on certain sectors of the economy. And [the result is] a very difficult economic situation unless the government gets out of the way and lets credit demands come down some. These people who are going around saying that monetary policy can do the entire job of getting inflation down are just terribly destructive. I don't know how in the world we can get that point over; monetary policy [alone] just won't do it.

VICE CHAIRMAN SOLOMON. I know, but you saw the House Banking Committee study. It said that the Federal Reserve was entirely to blame for inflation and that the Treasury deficit had no impact.

MR. SCHULTZ. I don't understand that.

CHAIRMAN VOLCKER. Who else? Does anybody else want to comment on the outlook and the dilemmas for monetary policy? Mr. Ford.

MR. FORD. I'll make a very brief comment. We're more optimistic than your staff because we are more optimistic about the results of your preaching. By the end of the year we're not outliers on any of these measures that have been tabulated here. But we are on the lower end [of the range of forecasts] for both unemployment and inflation because we think there is a chance with the new Administration coming in that we will avert a recession during the first half of the year, contrary to the staff forecast. That assumes that the Fed does its job on the monetary aggregates and further that eventually there is a change in spending and tax policy on stream that will have some favorable effects on the economy in real terms. And we think that by the end of the year the economy won't be booming but will be going along reasonably well, below the long-term growth path but in a positive vein generating growth of about 3 percent on average in the last two quarters with a reasonable unemployment rate and a lower level of inflation than we have right now. That [assumes] that we do what we say we're going to do on the aggregates and that people take seriously the need to reduce spending to keep the deficit under control. And we are assuming that they will.

CHAIRMAN VOLCKER. Mr. Mayo.

MR. MAYO. Coming from what with due humility we consider to be the lousiest performing District--economically speaking we have a recession--what surprises me is that we don't have more difference with the staff forecast for the national economy. Actually we are right in the center of the range here, which I guess I can attribute to our native optimism that somehow some of this is going to work out all right or, to put it the worst way, that our bad performance this year in the Chicago District will somehow be offset by Jerry's great efforts in the great Northwest, Bill's down in the Southeast, and John's in California. We are just going to have to muddle through on this. I think it's too early to come to Lyle's conclusion that we haven't really accomplished anything. We have set in place a lot of things and, although I'm usually the one who is more despairing of what the Reagan Administration is going to be able to do in the next year, I find that some of the comments here today are just too pessimistic for me. If his initial effort looks too small, I think the President is going to have to get into entitlements and he'll figure that he has three years to reelection and will swallow some sort of change in the indexing provisions now. It's the only way out. Unfortunately, our very vigorous new Budget Director got off on the wrong foot by starting off with proposed big cuts in foreign aid and, bang, he ran right against the new Secretary of State. I submit that he picked the wrong horse to start his campaign. I think it would have been better if he had started on the domestic side, even though there is always a tendency for a Budget Director to start on foreign aid because it has no voting constituency. Anyway, I think he can get some spending down; I hope by as much as the staff forecast shows. I would say that is fairly optimistic on spending cuts.

CHAIRMAN VOLCKER. Heartfelt comments from an old Budget Director!

MR. PARTEE. A safe thing to work on, Bob, [in] the deficit is the [debt] servicing [cost]. That could be cut.

MR. MAYO. You mean interest rates.

MR. PARTEE. Yes.

MR. MAYO. Sure, it's only \$100 billion! It's up to what--16 or 17 percent of the [total budget].

CHAIRMAN VOLCKER. John Balles.

MR. BALLEs. Well, I'll just provide a quick little interesting piece of perspective here. My staff checked some recently published forecasts by a number of major nationally known outfits such as Wharton, Evans, Michigan, UCLA, Townsend-Greenspan, DRI, and Chase. I was surprised to find out--maybe you guys already knew it--that our Greenbook forecast is at the pessimistic end of the scale. That is not to say that it's wrong, but it does show the lowest real GNP and the highest inflation.

MR. KICHLINe. We have taken a look at that. We don't have calculated medians for all of those services. I do have the numbers for four of them. Let me just pick DRI, which I think exemplifies the

problem. It's especially true for 1982. DRI has 13.7 percent nominal GNP growth for 1982. They have real GNP of nearly 4 percent--it's 3.9 percent--and the staff has a little under 1 percent. They believe that to be consistent with bill rates that are lower in 1982 than they are today. I think 13-3/4 percent nominal GNP growth doesn't very easily go with 3-3/4 percent money growth and declining bill rates. So, I think the nub of the problem in many of these outside forecasts is that at least implicitly, if not explicitly, different monetary assumptions lie behind them.

MR. SCHULTZ. I would just note that I happen to get Burt Cox's forecast for Merrill Lynch economics. I am very much afraid that the Secretary of the Treasury may be looking at that one because it's much more optimistic than yours. And I think therein lies part of the problem.

MR. KICHLINE. Well, I have that one. That's a very interesting one because it has a 1982 forecast of 13 percent for nominal GNP growth and the interest rates in that Merrill Lynch forecast go down from 14 percent in the current quarter to 6-1/2 percent.

CHAIRMAN VOLCKER. To 6-1/2 percent?

MR. KICHLINE. Yes, to 6-1/2 percent in the fourth quarter of 1982.

MR. PARTEE. What is that nominal GNP?

MR. KICHLINE. Nominal GNP is 13 percent, real GNP I believe is 6.1 percent, and the GNP deflator is 6-1/2 percent.

MR. WALLICH. I believe they raised the interest rate level lately.

MR. KICHLINE. Well, this was done this week. I don't know what their forecast is.

MR. SCHULTZ. That's the problem with this stuff floating around: It doesn't bear much relation to reality.

CHAIRMAN VOLCKER. Does anybody else have a comment? If not, we are not going to get very far into these long-range targets tonight. It's clear that we have a difficult decision, as always, but a philosophic choice tonight, if I interpret the comments I have heard correctly. We are looking at a gloomy business forecast; one view is that it's constrained by money so we could unconstrain the forecast by increasing money. The other view is that we should go ahead with monetary restraint on the basis that the forecast is really going to turn out better or that we need it anyway in terms of the ultimate need to eliminate inflation. It's a little hard for me to see that we can adopt the "give up" alternative, if I may term it that, at precisely this stage in our economic evolution. I try not to be overly optimistic, and I don't know if I'm being overly optimistic, but I personally think that the Administration is probably going to try harder on the spending side than most of the comments around this table suggest. What actually is going to be accomplished, I don't know. I don't have any number and I don't have any precise

information of this sort. The kind of number that the staff put in for 1982 must be on the order, anyway, of what they are thinking. And they are aiming for considerably more than that I am sure by 1983. I also sense that they are going to try to get a vote on a big spending package before they do anything on taxes or do it in the same vote in some maneuver. Whether that can be done, who knows? But there is a certain amount of sentiment in the Congress to do something. And if this can be maneuvered in a way so that everybody doesn't have to vote one by one on each particular program--if they find some way of packaging it so that when it comes to a vote in the Congress as a whole everybody can vote in favor of expenditure restraint and not against a particular program--there may be some possibility [of passage]. Whether that can be done or not, I don't know. I also suspect that, if anything, the tax reduction will come later than the staff has assumed. I don't think it's going to come any sooner. But that all remains to be seen.

When I look at our targeting exercise for the next year and realize that I have to explain it, I will tell you that I am in trouble for more reasons than the difficulty of making up a target. I can barely understand what we are doing in terms of the adjustments that have to be made to last year's [M1] figure in one way or another! I thought it might be useful in the little time we have left [this evening] to go over the problems as I perceive them so that hopefully we can talk on more or less consistent grounds tomorrow. That may be more than I can hope for because I keep getting confused by this every time I go through it myself. Let's look at something like the numbers--and I'm just basically worried about the M1 numbers--on page 6 [of the Bluebook]. I am sure that Mr. Axilrod will be listening carefully to me and will tell me that I am confused by the time I get finished. For either of the M1 numbers the Bluebook shows the target ranges for '80 and the tentative target ranges for '81 that we had adopted in July before we knew they were off course or internally inconsistent. There are some alternative target ranges for '81, which presumably are on the same basis as those tentative target ranges. Then it shows as a memo the actual growth in '80, which I don't think conforms to any of those targets. As a taking off point, so to speak, it seems to me that we have to think about this in one of two ways. And I just boggle at both as I think about explaining this when I go before the [Congressional] committees. One is that we could think of adjusted ranges for '80 that we presume economically are the same as those targets that are listed here. These are the shadow cones, so to speak, that we had. In that case, we would be taking off--it's the same target presumably, and the same economic substance--[from a point] consistent with the actual results. That is something like 2-1/2 to 5 percent for M-1A and 4-1/2 to 7 percent for M-1B. Is that roughly right, Mr. Axilrod?

MR. AXILROD. That's right. Yes, [it's an adjustment of] about 1-1/4 points for M-1A and .5 or .6 for M-1B.

CHAIRMAN VOLCKER. If you think of that assumption in your head and you know what change in the target is appropriate--whether you want a reduction or unchanged or whatever--you make the assumption that the relationship between M-1A and M-1B was the same as last year. That's just a base point for starting. It is not going to be the same. But just to keep straight in your mind what you are talking about, I think you would have those targets in mind that I just gave

orally and then you would talk about a target that was unchanged or [up or down] 1/2 or 1 point or whatever you thought [appropriate] from there, on the assumption that the relationship between M-1A and M-1B was the same as it was last year.

Alternatively, if you wanted to talk in terms of targets like we had last year, then I think you ought to mentally adjust that memo of the actual growth figure and add to M-1A this unexpected transfer out of M-1A. You get something like 6-1/4 percent, which is what it says in the footnote. For M-1B you have something like 6-3/4 percent. Those numbers are then consistent more or less with the targets on the left hand side of the page. Now, in fact, what we are going to have this year, of course, is something quite different from any of these. It's not only going to be different but, because of what went on in January, it is quite clear that in a sense it is going to have a big dogleg in it. We had a big decline in M-1A in January and that probably is proceeding to some extent in February and then will return to some normal [pattern], while M-1B is going to have a dogleg to the right. I'm just looking at the charts on [subsequent pages], where M-1B is going to be exaggerated in January and February and then resume, presumably, some kind of normal growth. Those doglegs bother me a little because if we just show a cone without the dogleg, it immediately shows figures that are way off the cone and just adds another element of confusion. I would suggest--I don't know whether we can conform to it or not--that we have to make clear what we are talking about in terms of citing whatever targets we think are appropriate. I'd suggest in the first instance that we forget about the impact of NOW accounts and the institutional change this year just so that hopefully we can keep the communications among ourselves straight. I played with the idea in my mind that that should be the target we give them, saying that we are not going to give them a target adjusted for NOW accounts until the January-February business straightens itself out, after which we will give them [an adjusted] one, beginning maybe from February just so we avoid this dogleg problem. But, really, one idea is as bad as another. I don't think there is a good way of doing this. In any event, we will have to tell them that the cone or channel or whatever we have that tracks the actual figures as reported over the course of the year will be subject to change as the year progresses--maybe every three months or so--as we evaluate what the actual NOW account impact is.

MR. ROOS. Is it feasible to ask the staff to take this table on page 6 and run off a little supplementary table we can use based on whatever we are going to talk about tomorrow?

CHAIRMAN VOLCKER. Maybe you could put it down both ways, if that's possible, Steve. Just put down the targets the way you have them but with the figure you cite [in the Bluebook] as the adjusted figure for last year. Then do it the other way with the ranges for last year adjusted retrospectively, with the actual results last year. I was going to suggest that there is a third way to do it, but the third way is very similar to the adjusted actual figure, I guess. Steve's adjusted actual figure still assumes that there is some modest trend shift between M-1A and M-1B that is going to persist forever more or less; but it's a very vague estimate, which is part of the difficulty. I think it might be helpful to put those figures down those two ways.

I'll make one more comment: Either way we adjust this, the M1 figures come out very close to the top of the range. And we could think of taking off from the top of the range instead of from the actual number, if you wanted to. There's not much difference; in a sense one could call it base drift or not; it's not a drift outside the cone that we had. We can't quite do that with M2, I don't think, because M2, which doesn't have all these other problems, ended up 3/4 of a percentage point above the cone. Presumably we have to call that base drift, I suppose, or whatever you want. But we can't blur it because they are not virtually the same numbers.

MR. WALLICH. Isn't base drift from the midpoint and not from the edge?

CHAIRMAN VOLCKER. Well, I think that's purely semantic. If you think of it from the midpoint, we have base drift under any definition. If we don't admit that it's base drift because growth was within the cone, we don't have it. It depends; different people have different views of these cones. Some people say the midpoint is the right target and any deviation is [measured from] the midpoint. Other people say that [the cone itself provides] the elasticity one allows oneself to adjust through the year and we shouldn't consider ourselves off course if we're within the cone. I don't think one way is right and one wrong. It all depends upon how one looks at it.

VICE CHAIRMAN SOLOMON. I think monetary policy is going to be restrictive as hell. Without making the problem any worse for yourself, even though I realize you are only talking about a quarter point in the case of the two aggregates--

CHAIRMAN VOLCKER. Well, I'm not really suggesting it for M2; there's virtually no difference because they are so close to--

MR. PARTEE. You get this problem--

CHAIRMAN VOLCKER. We just make a different estimate of the target when we make it identical.

VICE CHAIRMAN SOLOMON. You're creating a precedent, and it involves accepting the base drift. What I'm afraid of is that the projections on interest rate levels may be right. If we are going to be talking about interest rates levels as high as are projected here, or current levels, and then we make [our range] somewhat tighter, we may find that we can't stay the course any longer.

CHAIRMAN VOLCKER. Well, I'm not necessarily arguing for one or the other. I suggest this as a possible method of presentation, if we want to take it. It does create a precedent; some people may think the precedent is good and some people may think it's bad. I think we'd better quit for the evening at any rate. If we could have a different piece of paper, it might facilitate [our discussion].

MR. AXILROD. Just make that table for M-1A and M-1B?

CHAIRMAN VOLCKER. Yes, I think that's all.

MR. AXILROD. It's very simple.

CHAIRMAN VOLCKER. [We will resume at] 9:30 tomorrow morning.

[Meeting recessed]

Session held on February 3, 1981

CHAIRMAN VOLCKER. We can come to order and turn to the long-range targets. Mr. Axilrod has prepared a little table in accordance with the instructions yesterday, which I hope is as "crystal clear" [as] he described it. It is a difficult thing to keep in mind. It's conceptually simple but somehow--

MR. AXILROD. It's the table, which should be in front of you, entitled "Long-run Targets on Alternative Bases." Probably the best thing to do is for me to go through it stage by stage. The panel on the left-hand side says "Abstracting from shifts to ATS/NOW accounts." That gives the target ranges for 1980 for M-1A and M-1B that the Committee adopted in February of last year and reaffirmed in July. There is a 1/2 point differential [between the ranges for M-1A and M-1B]. The best way to conceive of it is that it reflects some higher trend growth in M-1B relative to M-1A and some small residual amount of shifting [to ATS/NOW accounts] we expected to occur at that time in New England, New York, and Pennsylvania; we were unable to [isolate the separate effects of those two developments]. That's how that 1/2 point differential gets in there. The second panel says "Reflecting shifts to ATS/NOW accounts in 1980." That means the shifts that occurred beyond whatever little residual we thought was left--[beyond] that 1/2 point. As you can see, we divided those shifts up, assuming two-thirds came from demand deposits and one-third came from savings and other time accounts. That would have lowered the M-1A target to 2-1/4 to 4-3/4 percent and would have raised the M-1B target to 4-1/2 to 7 percent if the Committee had known in advance what those shifts would be and had stated its target that way.

Now, it is those ranges to which it is more proper to compare the actual growth in M-1A and M-1B for the year. As you can see, that was 5 percent and 7-1/4 percent, [respectively], roughly 1/4 point above the tops of those ranges. Shifting back to the first panel, the adjusted numbers, one can look at that in another way. One could say: If I want to compare the behavior of M-1A and M-1B to their ranges, I can either adjust the ranges or I can adjust M-1A and M-1B. In the first panel you can see that if you take the actual growth in M-1A of 5 percent and add 1-1/4 points to it to represent the demand deposits that were shifted out into ATS and NOW accounts, you get 6-1/4 percent; and if you take the actual growth of M-1B of 7-1/4 percent and subtract from it the 1/2 percentage point that represents the NOW accounts and ATS accounts that came in from savings deposits, you get an M-1B growth of 6-3/4 percent. In both cases, you can see that growth is 1/4 point above the top of the range. You can view the ranges and the growth rates in two different ways; [either way growth is] 1/4 point above.

CHAIRMAN VOLCKER. If I may just inject here, all of this is based upon the assumption that Steve mentioned of a two-thirds/one-third shift. Unfortunately, I think that's a rather weak assumption. We don't have much direct evidence during this period. That is inherent moving forward from this point as well as looking backwards, and it's a ballpark figure. That's all one can say about it.

MR. MAYO. But the two-thirds, Paul, is implicit both in the range and in the growth figures, is it not?

CHAIRMAN VOLCKER. The same assumption is used for both. You can see that either way you look at it, growth in 1980 came out 1/4 percentage point above [the ranges]. It's just a different way of looking at the 1/4 point.

MR. AXILROD. If we used one-half and one-half [instead of two-thirds and one-third], both the ranges and growth rates would be adjusted by those relevant amounts.

MR. PARTEE. Steve, the actual growth figures were 5 and 7-1/4 percent last year. Those are the only ones the public has available?

CHAIRMAN VOLCKER. That is correct.

MR. AXILROD. That's right. I'm not sure if the Chairman didn't say in some testimony recently--

CHAIRMAN VOLCKER. Well, the published figures are the 5 and 7-1/4 percent. In testimony we gave the public those ranges shown in the right-hand column--that top part. We've never given them the adjusted figure, although it's a mirror image, I think.

MR. AXILROD. Now, focusing for a second on the left-hand panel, line 1 there says "Target ranges for 1981 with a 1/2 point reduction." That simply is going down 1/2 point from the target ranges for 1980. Carrying on the 1/2 point differential by this time reflects whatever we felt was going on in 1980 and continues in 1981. Line 2 is a 1 point reduction, simply going down 1 point. Then the next line says "Expected adjustment to target ranges to reflect actual shifts to NOW accounts in 1981." Of course, that reflects our expectation of the actual shifts at this moment. Our estimate is that M-1A would go down 7-1/2 percentage points more to reflect the demand deposits going into NOW accounts and that M-1B would go up 2-1/2 points more to reflect the savings deposits or other assets going into NOW accounts. That's on the present thought that there will be a sharp slowing in growth of these accounts beginning pretty much immediately and that the shift instead of being four-fifths from demand deposits and one-fifth from savings works its way down to two-thirds and one-third. That averages out to about three-fourths, given the extent of the shift that occurred earlier in the year, though that could, of course, vary. In any event, with that assumption, to get the adjusted ranges to reflect the actual shifts to ATS and NOW accounts, you have to take that 7-1/2 points off of the M-1A range, which gives you minus 4-1/2 percent to minus 2 percent. And you have to add the 2-1/2 points to the M-1B range, which gives you 6 to 8-1/2 percent.

Shifting over to the second panel and focusing on that "Expected adjusted line," the reason the minus 7-1/2 percent becomes minus 6-1/4 percent and the plus 2-1/2 percent becomes plus 2 percent is that we are carrying forward in the second panel the actual extent of shift that occurred in 1980. That is, if the Committee specified its target for M-1A as down 1/2 point from the adjusted range to 1-3/4 to 4-1/4 percent and its target for M-1B as down 1/2 point from the adjusted range to 4 to 6-1/2 percent, then it is carrying forward in those ranges the shifts that occurred in 1980--not the 1/2 point differential between M-1A and M-1B but what turned out ultimately to

be a 2-1/4 point differential. That is being carried forward as if it were going to occur in 1981. Therefore, the expected adjustment you have to make is less. In the case of M-1A it's less than 7-1/2 percent; it's 6-1/4 percent. In the case of M-1B it's 2 percent. Of course, if you add those in, as you can see in the bottom lines, you get exactly the same numbers in the right-hand panel and the left-hand panel.

CHAIRMAN VOLCKER. It's all crystal clear!

MR. AXILROD. I'm sure the public will very easily grasp this!

MR. SCHULTZ. I think it is clear.

CHAIRMAN VOLCKER. Well, you may now understand why I have doubts that anybody can explain this. I have great confidence in my ability to explain, but...!

MR. MAYO. But the \$64 question, Paul, is: How are we going to state our ranges and what will be published?

CHAIRMAN VOLCKER. That's right. That's the question I want to raise here now. I suggested tentatively yesterday that we may not want to indicate the bottom line here. I don't know whether it's a good idea; maybe we should. Of course the bottom line is the same, whichever way we [describe it]. If we do state the bottom line, it's going to have to be stated in an exceedingly tentative fashion; we will have to say that we are prepared to change this every quarter or whatever, depending simply on an analysis of what is going on. One of the difficulties we have is just that the shifts are so big. We have a reasonable appraisal of where this money is coming from at the moment in January. But the actual growth rates are very sensitive to the assumptions one makes. We do think it's in the ballpark of 75 to 80 percent or a little more [from demand deposits]. We will have a little finer judgment when we get some more thrift institution survey data. But when we are not having big shifts, it is exceedingly hard to tell what fraction is coming from where because it doesn't distort the other figures enough to permit a fine judgment. The inherent problem is that when things are shifting, one can measure it. When things are in a more steady state and people are building up NOW account balances, let's say, they are not actually shifting from demand deposits; they are just holding a NOW account. The NOW account goes up and we don't know whether it's going up because people are holding more transactions balances of the traditional type or whether it is because there is very little difference--or none in the case of commercial banks--in the interest rate, and thus money they might otherwise have put in a savings account ends up in a NOW account. It's just very difficult to judge; it's a bit of a shot in the dark as to what the adjustments last year imply about what that proportion is. There's just no way to cross-check it, really, I don't think.

VICE CHAIRMAN SOLOMON. There's also a problem that when it's a big adjustment, even the skeptics recognize that these screwy numbers are a result of the adjustment. But when it is a very minor adjustment, then the skeptics are going to say we are trying to fudge the figures on the growth [of the aggregates].

CHAIRMAN VOLCKER. That's right. We have the question of whether we want to give people those figures on the bottom. In one sense, this is a substantive problem but not a presentational problem. They are the same both ways, although there is a psychological problem in that they look distorted. The other question in trying to explain how the devil we got there or not even giving those bottom numbers at all is: Should we think in terms of giving them the kind of ranges on the left-hand side or the right-hand side of this table? It depends upon where your starting point is. What little foundation has been laid is that the public has no actual figures other than 5 percent and 7-1/4 percent. They have been exposed a little to the idea that those targets last year were mutually inconsistent and should have been revised, as shown on the top row [of this table]. Just proceeding on that basis, I think the presentational problem we have is that the actual 1/2 percentage point reduction in the M-1B range happens to be the same as the range that they are familiar with for last year. When you look at it at first blush--and maybe it's fifth blush--it looks as if we haven't changed the range, although we are insisting that we have lowered it. Economically, we have lowered it; but we may have a helluva time convincing people that we have lowered it when we cite the figures. On the other hand, if we use the other figure, then we have to say that this is a range that is consistent with an actual figure that we never gave you. It is [consistent with] an adjusted actual figure, which we are now going to give you--the growth in M-1B last year was not 7-1/4 percent but 6-3/4 percent--and we will have to go through all that rigmarole. More importantly perhaps at this stage, I don't think it makes any difference which way we look at it and present it in the end, so long as we are straight in our conversations today when somebody is citing a range whether they are working from the right-hand or the left-hand side of this table.

MS. TEETERS. I think we would be better off using the right-hand side. Those numbers, the 5 percent and 7-1/4 percent, are in existence and in the public domain.

CHAIRMAN VOLCKER. That's the great advantage of using that side of the table.

MS. TEETERS. It seems to me that we would be better off trying to explain the change in the range than we would trying to adjust the existing numbers.

MR. GRAMLEY. I wonder if it wouldn't be helpful also, to reduce the confusion as much as possible, to focus exclusively on M-1B as the number for narrow money and to think about dropping M-1A altogether.

CHAIRMAN VOLCKER. Eventually I think we want to do that. I would assume that we would do it next year if we don't do it this year. In my mind, the problem with doing it this year is that because we are getting switches that expand M-1B artificially in a sense, it helps in terms of perspective if we also give the M-1A range, which shows a decline. If [critics] keep saying we haven't reduced the range, we tell them to look at the whole [picture, showing both M-1B and M-1A] and it's obvious that we have. That's the one advantage of keeping both of them.

MR. MAYO. Well, Paul, one of the interesting mathematical outcomes of Steve's table is that the average of M-1A and M-1B is the same; whether one takes the target ranges adjusted or unadjusted, it comes out to 4 to 4-1/8 percent. Now, whether that helps you any or just confuses the issue--

CHAIRMAN VOLCKER. Which one are you looking at?

MR. MAYO. I'm looking at the right-hand figures exclusively. I'm looking at the 1/2 point reduction, which says 1-3/4 to 4-1/4 percent for M-1A and 4 to 6-1/2 percent for M-1B.

CHAIRMAN VOLCKER. But they're not the same.

MR. MAYO. If you take the midpoint of those two ranges, it's 4 percent. If you do the same thing with the adjusted figures on the next to the last line in the table, the arithmetic mean is 4-1/8 percent. I don't know whether we can use that to advantage in explaining that basically this is merely a switch within the M1 concept, [regardless of] what is M-1A and M-1B; I think it's rather interesting that it comes out to that.

CHAIRMAN VOLCKER. It comes out close, as I guess you said, not quite the same. It would come out the same if the shift were 50/50.

MR. MAYO. That's right.

CHAIRMAN VOLCKER. We cannot say that the shift was not 50/50 last year, because we just don't know. If it was 50/50, it just lowered the one range by as much as it raised the other.

MR. MAYO. While it sounds like a statistical gimmick to explain it that way, it does indicate the basic transference between the two to explain the adjusted versus the unadjusted ranges.

MR. CORRIGAN. Steve, in terms of the estimate, 50/50 sounds as though it might in fact be closer to what is happening.

MR. AXILROD. Well, we don't have any evidence that that's what is happening.

CHAIRMAN VOLCKER. Are you talking about what happened last year or now? There is pretty strong evidence that right now the shift is at least three-fourths. But our assumption is that that's very much a transitional thing during the first stages of this.

MR. CORRIGAN. Well, that's one of the things I wanted to ask about. I don't know to what extent it's representative, but at least in the Ninth District virtually all of it is coming from ATS accounts.

MR. AXILROD. These are net shifts, so [a shift from an ATS to a NOW account] doesn't affect this. Both ATS and NOW accounts are in other checkable deposits, so that doesn't lead to an increase in other checkable deposits.

MR. CORRIGAN. My question is: What happens to the original savings account, the second leg of the existing ATS account? At the

precise moment in time that the switch is effected, the balance has to be in the demand deposit part of the ATS account, but that's only at that precise moment. The day before or the hour before it was in a savings deposit.

MR. PARTEE. Which is counted as other checking.

MR. CORRIGAN. Well, that's what I'm wondering.

MR. AXILROD. Yes, sure. If it was an ATS account and we got the data from a bank that was reporting accurately, we added [it to] other checkable deposits.

CHAIRMAN VOLCKER. Yes, the shift from an ATS account shouldn't affect this, if everything is being reported correctly.

MR. CORRIGAN. Okay, I guess that's my question. And you are as comfortable as you can be [about that]?

MR. AXILROD. It's clear, I suppose, once there are a lot of NOW accounts, that to whatever extent people made use of a savings account before they are going to put their savings in a NOW account for a while instead. So, eventually, we assume that this will be a much more complicated animal to evaluate; it's going to move not just as a transaction account but as something that's a mix between a transaction and a savings account.

CHAIRMAN VOLCKER. That's the real trouble, I think. Once the NOW account has been created, it will inherently have some characteristics of a savings account and not the old style transaction account.

MR. CORRIGAN. Well, the average balance says that.

MS. TEETERS. Will we ever know for sure what the shifts were?

CHAIRMAN VOLCKER. No. Nothing is for sure.

MS. TEETERS. Well, we won't have any information on this.

MR. AXILROD. We asked the banks early in January and we had asked them at one point last year--I forget exactly when. The results last year were not inconsistent with the two-thirds/one-third proportions that we had derived from past experience. But it couldn't be proved one way or the other.

CHAIRMAN VOLCKER. We can ask a bank where the shift comes from. We may not get an accurate answer, but at least we can ask it.

MR. FORD. They don't know.

CHAIRMAN VOLCKER. In some cases they think they know, but the answers are pretty much all over the lot. It is at least a concrete question to ask them. Once the shift has taken place and we ask them why their NOW accounts have gone up, they don't know what the motivation of the customer is.

MR. FORD. Even those banks that try to monitor it only have partial information about where the money going in [came from]. I would say you are very right to be concerned about our vulnerability for surprises on the M-1B range adjusted, whichever one we choose. We have done in depth what you are suggesting with some S&Ls and some banks. We asked them what they expect. The very limited feedback I get is essentially that the S&Ls are just delighted by how all their projections are being overrun; they are not sure how much of it is coming out of [banks]. On their own internal accounts they can track some of the switches from one account to another, but on the net inflow of funds to NOWs they don't know exactly.

CHAIRMAN VOLCKER. We had people from the National Savings and Loan Association in here the other day and they had done some kind of a survey. This is the smallest part; most of the shifting is in the commercial banks. But for what it is worth, they said their survey showed 60 percent was coming out of their own accounts, which meant basically savings accounts; 40 percent was coming from elsewhere. They couldn't identify where "elsewhere" was, but they assumed it was mostly from commercial bank checking accounts. But that's one survey of the S&Ls. Now, the banks have given us the surveys that you people made and had tabulated, weighted probably incorrectly. That showed more than 80 percent of it, in this first blush, coming out of their own checking accounts. So, these figures reflect some casual weighting together of the relatively small thrifts and the relatively big commercial banks at over 80 percent. For the thrifts I don't know whether to assume 50/50 and then come up with something like 80 percent for the combined total for these weeks. But they expect, as Steve said, that this will decline when we get over the initial shift.

MR. FORD. This assumes what--that \$13 or \$16 billion out of \$40 billion for the whole year is already behind us?

MR. AXILROD. Yes, that's the monthly average [for January]. Effectively, it's \$20 billion going in from then, so it's almost half.

MR. FORD. Looking at the numbers, my feeling is that the assumption that in one month we already have half of the full year's shift is where we are most vulnerable.

CHAIRMAN VOLCKER. Yes. That is why I think we have to retain the right to change these [ranges]. Let me say that we not only have survey data now, for what it's worth, but that these shifts are so big that it does not appear that we can explain a large part of the shift by an exceptional decline in savings accounts. Savings accounts have been declining pretty fast, but they were declining pretty fast in December. And money market funds are going up very rapidly now. So, if you make some allowance for how much is going out of savings deposits into money market funds, there isn't all that big a residual left to explain what is going into NOW accounts. That tends to confirm that most of it came out of checking accounts on the first blush.

MR. MAYO. Well, Paul, the fascination of this arithmetic that I was just doing is that basically averaging the two--M-1A and M-1B--neutralizes the transfer evaluation problem. All one is doing in that way is just isolating what smaller part of this may have come

from M2 into one of the M1s. It seems to me that perhaps part of the defense we could use when people say our figures are no good on these transfers is that it really doesn't matter if one looks at M-1A and M-1B together.

CHAIRMAN VOLCKER. It literally does not matter if you could make an assumption that it is coming half and half; you would get mathematical precision in that answer. But it does throw it off as soon as you depart from that assumption.

MR. MAYO. Well, now wait a minute. I don't think the half and half has much to do with what I'm saying. I am only saying that we are neutralizing; it doesn't matter whether it's half and half or two-thirds or three-fourths. This averaging says how much is coming from M2 or somewhere outside of the M1 concept.

MR. PARTEE. Well, the averaging gives a nice low figure. That's all one can say.

MR. AXILROD. I'm not sure I follow your averaging.

MR. MAYO. Well, I don't want to take time here.

CHAIRMAN VOLCKER. Well, in fact, we are never going to know in the end how much came out of M2 and M1.

MR. MAYO. The more we can make the transfer issue a subsidiary issue, the less trouble we are going to get into on that.

CHAIRMAN VOLCKER. The other way of handling it is the way Governor Teeters suggested last time: Add savings deposits. The trouble with that is that it's quite evident right now that savings deposits are declining very rapidly for entirely extraneous reasons, so that doesn't give any satisfactory answer.

MR. GRAMLEY. The reasons aren't entirely extraneous. If we put on monetary restraint--

CHAIRMAN VOLCKER. Well, extraneous to these shifts here. I think all we have to do at the moment for purposes of our discussion now--we have presentational problems--is decide whether we want to talk off the right side of the sheet or the left side of the sheet.

MR. ROOS. The left side is easier because those are the figures we have used in the past. It seems to me we have to recognize that there will be a period of adjustment. I feel more comfortable using the left side, not that I don't think we could adjust to either one. But in your testimony last year, for example, you talked about 4 to 6-1/2 percent for M-1B; and our Bluebooks and our actions last year were all based on the figures as shown in the left column. I'm just a little more comfortable with them, but we can use either one if we stick with it.

CHAIRMAN VOLCKER. The really important thing is that we keep in mind in our comments which one we are talking about. We can talk about both of them, I guess, and decide the presentational issues afterwards. Let me just say one other thing, which I didn't say yesterday. The President is going to make a speech on Thursday; he's

going to present a State of the Union Message or some kind of long message outlining his economic program on the 18th. I think that is the current schedule. It's always possible that that is going to slip. At the moment my testimony is scheduled for the 19th. That probably will be delayed for that reason and, with the agreement of the [Congressional] committees, we will submit the report after the statutory deadline so that we have a chance to write the report in the light of what the President says. I don't mean delay very long. It would be, say, Tuesday of the following week instead of Friday the 20th of the previous week. It is more likely than not that the whole schedule will be shoved back by several days in the light of the President's schedule, although I can't be certain of it. There is a substantive problem, to the extent it's relevant, that conceivably knowing what the President has to say might shade our own judgments here. I only say this because I don't know that we have to be absolutely conclusive today. I'd like to come as close to it as possible and make at the very least a tentative judgment; but we can reconfirm it between now and whatever date [the report is made]. What is today's date? Today is the third, so we're talking almost three weeks before we actually report. We may or may not want to make use of that [interval].

MS. TEETERS. We may also want to shift [the ranges] in July, which we haven't done for the past two years, because we will have a better idea of how much of the program is going to pass Congress. The shape of the program may be very different from what has been proposed this month.

CHAIRMAN VOLCKER. Yes, we may be able to take some account of that, but we won't know how Congress will react. We won't know a lot of things, so there will be some continuing uncertainties. The only other thing I would say as a preliminary point--in terms of psychology, imagery, and substance in the light of what we have said in the past--is that I don't see how we can avoid some reduction in some or all of these targets, properly interpreted. I'm not saying just what the arithmetic is going to look like, but--

MR. PARTEE. We are going to have to move M2 up, Paul.

CHAIRMAN VOLCKER. Well, let us discuss it now at this point. Who would like to comment?

MR. WALLICH. We'll have some base drift anyway over two years that at least offsets or more than offsets the reduction--

CHAIRMAN VOLCKER. Well, let us proceed. Who would like to comment? Mr. Morris.

MR. MORRIS. I'd like to suggest, Paul, if we do go ahead with M-1A and M-1B guidelines for 1981, that we state the guidelines abstracting from shifts in NOW accounts. In other words, I'd eliminate this bottom section because, with all due respect to the quality of our staff, I don't think they can possibly come close in estimating the shifts. The prima facie case is the fact that they were off by \$13 billion in the first week. And the idea that we are going to see half of the total annual adjustment to NOW accounts in one month goes against the grain of all prior experience. I just don't believe it.

CHAIRMAN VOLCKER. I don't think there is any doubt that the staff or anybody's staff or any member is incapable of making a reliable judgment at this point on how big these shifts are going to be. The only issue is whether to give a figure and say we are going to revise it freely or not to give a figure at all. But I fully accept what you say about the impossibility of [accurate estimates].

MR. MORRIS. The problem with giving a figure is that that is what the press and the market will be taking as our target. And to the extent that we deviate from it, they are going to say that we are again not meeting our guidelines. It puts us in a very vulnerable position to establish guidelines on the basis of estimates that could have a margin of error of plus or minus 100 percent or maybe more.

MS. TEETERS. That is the advantage of keeping M-1A. If we have to raise the M-1B range later, it will show up as a reduction in the M-1A range, so we could show our--

MR. MORRIS. Not necessarily. Right now, with the ceilings the same on demand deposits and NOW accounts, it seems to me that it would be in the interest of any banker to say to a customer: "Look, if you want a NOW account, fine; but let's please close your savings account because there is no point in having two accounts." Maybe shifts out of savings haven't been so great in the first week, but that doesn't mean that they can't be great later on.

CHAIRMAN VOLCKER. Of course, what really bothers me is not only that we cannot estimate this shift now but that we won't be able to estimate it very accurately after the year is over. Do you want to comment on the substance of where the target--whether shadow or otherwise--should be?

MR. MORRIS. Well, no. I think the important thing is that whatever targets we establish be ex NOW accounts.

MR. SCHULTZ. Do you think that's easier, Frank? If we put our targets [that way], when the money supply figures come out they are going to be different from our targets. The average person in the public doesn't understand all of these things. And anybody who does try to look at the money supply figures--though I guess that's not the average public to start with--will see that we publish target ranges and then the numbers that come out are outside of these ranges. Isn't it better--

MR. MORRIS. That's why my position is that we should have no M1 targets but simply have targets for the larger aggregates.

CHAIRMAN VOLCKER. Just so that the discussion can proceed, let's try to resolve how we present the targets after we decide what they should be, recognizing that there is an issue there. Your position is that we shouldn't have an M1 target at all.

MR. MORRIS. Right.

MR. PARTEE. I just can't agree with that.

CHAIRMAN VOLCKER. Well, you are going to have plenty of time to say whether you agree or not. What M2--or M3--target would you like to have, Mr. Morris?

MR. MORRIS. I would take the lower ones, alternative II.

CHAIRMAN VOLCKER. You'd actually raise them from this year's?

MR. MORRIS. Well, I would rather not raise them from this year's; I'd like to have the staff explain to me why we apparently must do that. Obviously, I'd prefer to have a somewhat lower range.

CHAIRMAN VOLCKER. Let's have a staff exegesis of that point.

MR. AXILROD. I don't think it's a matter of "must," but essentially it's because last year growth in M2 was almost 1 percentage point above the target of 6 to 9 percent. We don't have much evidence of significance in the past two years that velocity of M2 rises or falls much. What seems to be developing is that, because of institutional changes, we now have assets in M2 on which the rates offered by institutions vary with market rates. So, the spreads between the active part of those assets and market rates don't open up to the extent they used to and we don't get large shifts in and out of those deposits to the extent we used to. Therefore, it doesn't seem unreasonable to think that we wouldn't get much change in the velocity of M2 this year. In fact, we have assumed about a 1 percentage point increase in velocity because we have a GNP projection of 9-1/2 percent for the year and alternative I assumes an M2 growth of about 8-1/2 percent. So, in our projection of what is consistent with M-1A and M-1B we are allowing for about a 1 percentage point increase in the velocity of M2. Another factor to consider, of course, if you look at it from the credit side and not from the side of the public's demand for assets, is that M2 except for the large CDs that are in M3 is essentially institutional credit. And given our estimates of the amount of mortgages and consumer loans and so forth that have to be financed at banks, we think banks are going to have to bid for a certain amount of funds to meet those demands and to maintain their place in the market. So, those are the factors that get us to this estimate, which is higher than the Committee's tentative range adopted in July. I would say also that at midyear we were assuming that M2 growth was going to be high in the Committee's range for 1980 or even [above it]. We never expected it to be down toward the midpoint of that 6 to 9 percent range for 1980. Those are essentially the reasons.

CHAIRMAN VOLCKER. Just as a little aside on the precision with which these figures are calculated and the weight put on small deviations from the target range: M2 got benchmarked 0.3 of a percentage point higher based upon a one-day observation on call data of RPs for nonmember banks in March.

MR. AXILROD. I thought it was only one or two tenths.

MR. MORRIS. Well, after that explanation, Mr. Chairman, I think I would stay with the tentative guidelines for M2 and M3 we established last year.

CHAIRMAN VOLCKER. You mean 6 to 9 and 6-1/2 to 9-1/2 percent, in other words?

MR. MORRIS. I mean 5-1/2 to 8-1/2 percent for M2 and 6-1/2 to 9-1/2 percent for M3.

CHAIRMAN VOLCKER. Wait a minute. You are going from these down to where?

MR. MORRIS. Steve says that he would expect [M2] to be coming in at the upper end of the range, but that our GNP projection is compatible with 8-1/2 percent on M2. If you want to make that 9 percent, that would be all right with me. We can make it 6 to 9 percent for M2 and 6-1/2 to 9-1/2 percent for M3. If there's ever a year when we ought to have a tight monetary guideline, it's this year.

CHAIRMAN VOLCKER. Okay. Who else? Mr. Black.

MR. BLACK. Mr. Chairman, I think your comment a while ago provided a good backdrop for the statement of these guidelines. We have to show some lowering in the ranges. Trying to get at how much that ought to be is a very difficult question. It's helpful if we go back and look at what we got in 1979 and 1980. I'm not sure I have the right figures on this, because I'm not sure exactly what the NOW account adjustment should have been for 1979. But as best we can estimate--Steve, you can correct me if this is wrong--it looks as if M-1B was running about 6.5 percent in 1979, abstracting from NOWs and that sort of thing, and came out at about 6.8 percent in 1980. Comparable figures for M-1A would have been 6-1/2 percent--although I'm not quite certain of that one--for 1979 and 6-1/4 percent for 1980. On M2, we don't have that adjustment problem; M2 grew 9 percent in 1979 and 9.8 percent in 1980. So, in general, we could say that there was a small deceleration in M-1A and there was a small acceleration in M-1B probably.

CHAIRMAN VOLCKER. If I may just interrupt you, Bob: On what page in the Bluebook are these past annual figures?

MR. BLACK. They are not in there.

MR. AXILROD. It's page 5, but we don't have the adjusted figure for M-1A in there.

MR. BLACK. What we did--and I'm not sure we are right--was to construct that, but the latest information we had was that about 45 percent was assumed to have come [from] savings. I wouldn't put too much stock in the figures I got; the main point I am trying to make is that there has been either no deceleration or comparatively little.

CHAIRMAN VOLCKER. Well, it's an interesting point. I was just wondering, Steve: Do you have any rough figures?

MR. AXILROD. I don't have them with me but I can get them. I'll get them and report.

MR. BLACK. I don't think that changes my point, but I would like to know those figures and would welcome having them. Anyway, there hasn't been a whole lot [of deceleration], so I would opt for

alternative II. One could argue that that's too much deceleration, but another point--the matter of base drift, which I think our critics are going to raise on this--is that lowering the range by 1 point in a sense compensates in large part for that upward drift in the base for both M-1A and M-1B since the ranges in alternative II would encompass a 1/2 percentage point downdrift in our [tentative] '81 targets, using the midpoint of the fourth quarter of last year as the base. For example, if we came out right at the midpoint of the target I'm suggesting, it would involve actual growth of M-1B from the fourth quarter of 1980 figure of about 3.2 percent, which would be within the range of 3 to 5-1/2 percent. But to a large extent it's to get rid of that base drift that we advocate this. I don't think we could really say that we want to raise the rate of growth expressed from that midpoint. That just doesn't make any sense. We are up here somewhere and we can't say: Well, the targets start down here. But in choosing how much we want them to come down, I think we have to consider that.

So far as what we publish for the public, that is a devilishly difficult question. I reached a point that is somewhat of a compromise of what Larry Roos said in that I think in choosing our targets we have to abstract from the NOW accounts. But in expressing these targets, I can visualize all the close Fed observers out there setting up megaphones in charts like those in the lower tier of the ones in the Bluebook and putting in the figures as they come in. And unless we give them those ranges at the bottom, with all the caveats that ought to go with them, they are going to have problems fitting the figures into anything like this. I think we ought to say one further thing, which relates to something I believe you were trying to get at as we closed yesterday: That we think this is loaded heavily on the front end. That is, we expect to have excessive growth in M-1B early and then to see it come back within the target, we hope; similarly, we expect very weak growth [in M-1A] in the first part of the year and we are going to be outside our range but hope to be in [by year-end]. I don't know of an easy way to do it. It's going to be awfully confusing. But on balance that seems to me the best way to do it; I think it is what Nancy was advocating.

CHAIRMAN VOLCKER. Let me just get clear where you are. If you were working from the left-hand side of the sheet handed out this morning, you are talking about 3 to 5-1/2 percent for M-1B?

MR. BLACK. That's right, yes sir.

CHAIRMAN VOLCKER. You have 2-1/2 to 5 percent for M-1A. What about M2 and M3?

MR. BLACK. I would just accept the ranges that the staff has worked out as compatible, as indicated in alternative II.

CHAIRMAN VOLCKER. You are not unhappy about going higher?

MR. BLACK. No, I don't really have any insight that would lead me to suspect their figures. I'd rather trust theirs than ours. If it were not for the base drift, I would opt for alternative I. I think that would be sufficient deceleration. It's not implausible to argue [for a deceleration] since we overshot. In a sense, we can't get away from that and we shouldn't slow it down too fast. But I do think people are going to raise that matter of base drift; and unless

we can say we somehow considered it, I think we are going to have some problems on that from the public. This seems to me an easier way of doing it because the only kind of growth rates that are going to make sense to a layman are the growth rates from where we ended up. That's about all I believe any layman is going to understand. Tomorrow, I'm not going to understand!

MR. PARTEE. May I ask Jim a question about this? The whole business is just so unclear to me. If President Black's recommendation were accepted by the Committee, would that be a tighter monetary growth target than you assumed in the Greenbook? He's opting for the 1 point [reduction]--that is, alternative II, with M2 and M3 the way they are specified here. Would that be tighter than your assumption in the Greenbook?

MR. KICHLINE. We would perceive it to be tighter; we view either M-1A or M-1B to be more closely related to developments in the economy than M2. So, as I understand it, [Mr. Black's recommendation] would be a 1 point reduction on ranges for the narrower aggregates, which is 1/2 point tighter than we had assumed.

MR. PARTEE. So you keyed in on alternative I, in effect. Is that right?

CHAIRMAN VOLCKER. They keyed to the midpoint of that. I don't know whether it implies necessarily--

MR. KICHLINE. It's 8-1/2 percent on M2.

MS. TEETERS. What would this do to your nominal GNP growth?

MR. KICHLINE. Well, it would be down a little. I must say that I would treat all of this with a great deal of caution.

CHAIRMAN VOLCKER. Who else? Governor Wallich.

MR. WALLICH. Bob Black to some extent has made my speech for me because I, too, think that the seeming severity of these targets is somewhat modified by the base drift. Now, the base drift could be figured from the midpoint. Then it would have been, I think, 1-1/2 points for M-1A and M-1B; I was wrong yesterday in saying it was 2-1/2 points because I didn't take into account the revised numbers in the footnote. On M2 I think it's 2-1/4 points, if you start from the edge of the band, assuming that we allow ourselves leeway at least up to the edge of the band. There's still a little leeway, 1/4 point, on M-1A and M-1B, and 1 percent on M2. So what we do in the way of pulling down under either alternative I or II we undo by this base drift. It's true that this is money that went into the economy in 1980 and it isn't going to go in hereafter. But Chuck Partee yesterday made the point that getting back on track really means running below track for a while if we have been above track. So the Partee integral, as it were--money under that curve--is stabilized. By the same principle, I think we have to look at the overshoot. I am somewhat encouraged by reading that on our new money demand function these projections really involve an upward shift of the curve, even though they involve an expectation of a downward shift on the old curve. In other words, we would have a fair reason to expect that shift for M-1A and M-1B. I'm not happy with M2, and I would suggest

pulling that down. It's true that we really can't control it very well; maybe controlling the economy is the only way of controlling M2. But I fear that it's going to be our one reliable guide if M-1A and M-1B behave peculiarly because of the adjustments; and there is the possible acceleration of growth in M-1B as savings accounts are transferred into it. The levels of M2 proposed here under either alternative I or II allow for fairly good growth of nominal GNP, so that actually looks to me like a fairly comfortable target; if we believe that there's some tendency for V2 to rise, it's excessive.

To come down to choices: First, in stating the numbers, I would leave out the recent shifts--they're too uncertain--and modify the numbers later; second, I would go to alternative II; third, in alternative II, I would modify M2 a little and take it to 6 to 9 percent instead of 6-3/4 to 9-3/4 percent and I would pull M3 down accordingly. But I haven't really thought M3 out, and I'm quite flexible on that. Thank you.

CHAIRMAN VOLCKER. I'm not quite sure what you are saying about the targets we should state for M1.

MR. WALLICH. I meant to say the left side of the sheet without the--

CHAIRMAN VOLCKER. Without the bottom row?

MR. WALLICH. Yes, without the bottom because that then gives us comparability. I understand what Nancy says: The figures the public knows about are those on the right-hand side. We will have to supply continuous translations of the visible figures into the target figures.

CHAIRMAN VOLCKER. Mr. Guffey.

MR. GUFFEY. Thank you, Mr. Chairman. The discussion that is taking place around this table this morning suggests that there's enough confusion, and we should not confuse the public further by your testimony late in February. With that premise, it seems fairly clear to me that we have no choice, as you stated earlier this morning, but to publish growth ranges for the year 1981 that are lower than what we had in 1980, even though we didn't achieve them. Thus, I would opt for alternative I, the straight 1/2 percentage point reduction in the M-1A and M-1B ranges from the published ranges of 1980 without the bottom line that's on the left-hand side. With respect to M2 and M3, I'm inclined just to adopt ranges that are 1/2 percentage point below what we established for 1980 as well, with a caveat or an explanation when you testify that at the time of the required July testimony you will reveal all of these shifts, believing that most of the shifts in NOWs will have taken place by that time. You would describe then what happened in 1980 and 1981 but with the assurance that we're moving toward a bit more restraint in 1981 than we had in 1980.

CHAIRMAN VOLCKER. Mr. Solomon.

VICE CHAIRMAN SOLOMON. I basically agree with what Roger Guffey has suggested: the 1/2 point reduction on the M1 ranges. We might consider a somewhat different approach on M2 and M3, however. It seems to me that you could say to the [Congressional] committee

that, given the uncertainty with regard to the new instruments and the structural and transitional shifts, we want to widen the range. We could widen it symmetrically and make it 5 to 10 percent instead of 6 to 9 percent. Or, if we feel there would be too much criticism of the widened range, then I would say that we are keeping it at 6 to 9 percent but we will have a clearer fix on it in July. Therefore, we are putting the committee on notice that we can't assess the effect of these structural shifts and these new financial instruments completely and that in July the numbers may be different and the targets for the rest of the year may be different.

MR. PARTEE. But those shifts wouldn't do much to M2, would they?

VICE CHAIRMAN SOLOMON. I'm not talking about the NOW accounts here. I'm talking about the developing financial instruments--the money market funds or six-month money market certificates.

MR. PARTEE. Oh, I see.

VICE CHAIRMAN SOLOMON. It seems to me that even though one can borrow against a six-month money market certificate, at least at Citibank, some of the components of M2 such as that, which are growing fast, are much closer to investments than to money in the transactions sense. Now, I know one can write a check on a money market fund but, even so, the people I see and speak with are considering these things and the rates paid on them to be much closer to Treasury bills, for example, than to passbook savings. So, we're getting into a new area with this kind of instrument and it seems to me we can argue either for a broader range for this year or for temporarily keeping the same range and then reporting on it in July.

CHAIRMAN VOLCKER. Mr. Schultz.

MR. SCHULTZ. Well, abstracting from the Partee integral and the Wallich differential and given my lack of confidence in the forecast and estimates of velocity and inflation, I have a very unscientific proposal. I think we ought to lower the M-1A and M-1B ranges by 1/2 percentage point from the ranges of last year and keep M2 and M3 where they were last year. It seems to me that we knew in the middle of last year that the relationships between the M1s and M2 and M3 were not right. We probably should have changed those ranges in July, and I don't think we're going to catch a lot of flak by not changing them now. I do think that most people still look at M1, particularly M-1B now, so I feel it's important to lower that by 1/2 percentage point. But it seems to me that, given the uncertainties, that's about the best we can do.

CHAIRMAN VOLCKER. What would you do about the bottom row?

MR. SCHULTZ. Bank credit?

CHAIRMAN VOLCKER. No.

MR. SCHULTZ. Oh, you mean how to present it?

CHAIRMAN VOLCKER. Yes.

MR. SCHULTZ. Well, I agree with Nancy that it's easier to talk in terms of the actual money supply data than to try to [adjust] the money supply figures as they're coming out week-by-week [in order to] abstract from [the shifts] every week. I think it's easier to try to explain it one time rather than every week, and that's what we'd have to do. So, it seems to me better to go ahead and make the changes in the target ranges and try to explain it and do it one time. To have to go through that process each week when the figures come out would be much more confusing than to try to tinker with the targets. Either way is lousy, but the one is lousier than the other.

VICE CHAIRMAN SOLOMON. Fred assumes that he can survive [without] impeachment! The [Congressional] committee--

MR. SCHULTZ. Well, sometimes Chairmen are expendable.

CHAIRMAN VOLCKER. Mr. Boehne.

MR. BOEHNE. There is a two-part process to this target business. One is the setting of the targets and the other is the hitting of the targets. Today, setting the targets is uppermost in our minds but, as the year goes on, hitting them becomes important. I think the realities of the economy, given what we see for nominal GNP and the outlook for fiscal policy, are such that we'd be very lucky to hit even the upper end of alternative I, let alone the midpoint, or even [the upper end of] alternative II. Even with a reasonable effort, we'd be lucky to hit the upper end of alternative I. But I favor alternative I and I would key on M-1B. I think that's what most people look at, and I would emphasize the 1/2 percentage point reduction there. I would make the other Ms compatible with that, and I think that means that we do have to raise the M2 and M3 ranges. As far as the presentation, I would drop the bottom half of the chart; the top half is confusing enough.

CHAIRMAN VOLCKER. Governor Rice.

MR. RICE. Well, Mr. Chairman, nearly all of the economic forecasts indicate little or no growth for this year. Our own forecast, of course, indicates almost no growth, at 0.1 percent for 1981. I would prefer to see the targets set at a level that would permit some real growth during the year. But we appear to be committed to this 1/2 percentage point reduction in the target ranges. I hope we're not committed to a 1/2 point reduction every year hereafter, but we do seem to be so committed this year. It seems to me that any pulling back from that would be interpreted as backing out of our commitment to monetary restraint. So, I would go along with what almost everyone has recommended so far--alternative I. I would take the target ranges specified under alternative I for M-1A and M-1B as well as for M2 and M3. I take it that the ranges suggested for M2 and M3 are those thought most consistent with the 1/2 percentage point reduction of the M-1A and M-1B ranges.

I'd just like to add something else. I would normally not want to take political considerations into account, but it seems to me to be an especially bad time to risk any kind of political confrontation. The Administration is seeking some real economic growth. While it calls for a policy of monetary restraint, it also emphasizes the need for a steady monetary policy. The word "steady"

appears in all of their pronouncements about monetary policy. It seems to me that increasing monetary restraint at this time is not a steady monetary policy. So, any increased restraint beyond what we have previously committed ourselves to--for example, [going] to a 1 percentage point reduction--I'm sure would be seen as not very steady. So, the ranges that have been proposed under alternative I would be the most restrictive, consistent with any possible growth at all.

CHAIRMAN VOLCKER. What would you do about the bottom row?

MR. RICE. I would throw that out. I wouldn't try to explain that.

CHAIRMAN VOLCKER. Mr. Roos.

MR. ROOS. Yes sir, Mr. Chairman. I'll be brief but please don't interpret my brevity as an inability to go through much of what has already been said. I would opt for alternative I. I believe we are committed to a policy of steady restraint with a gradual reduction in the rate of money growth in order to have an impact ultimately on reducing the core rate of inflation. Intellectually, especially recognizing that a rather overly expansive growth of money might have occurred last year--we were a bit above the top of our M-1B range--to jam that down too abruptly could have serious effects on the real economy. I think a 1/2 percentage point reduction in the M-1B range and a commensurate reduction in the ranges for the other aggregates is in order. It maintains consistency with what we announced last year. I agree with what someone else said that the real key is our ability to achieve our targets. I don't think our problem in the past few years has been one of setting incorrect targets; it has essentially been our inability to achieve those targets. We talked about that yesterday, and I expressed my reservations. In sum, I would opt for alternative I, omitting the bottom portion of it.

MR. SCHULTZ. I'm not sure I understand. What would you do with M2 and M3?

MR. ROOS. I would go with alternative I.

MR. SCHULTZ. All the way down the line?

MR. ROOS. All the way down the line, recognizing that in our peculiar way of looking at things we will concentrate on M-1B. But I certainly would not be unhappy with [that].

CHAIRMAN VOLCKER. Mr. Mayo.

MR. MAYO. My first fascination, Mr. Chairman, was with the M-1A and M-1B ranges of alternative II on the grounds that it helped get over any problems you might have in testifying with regard to base drift. The longer I thought about that, the more I came to the conclusion that the base drift isn't significant enough, at least in thinking it through myself, to cause you that much trouble. As a practical matter, I think we're better off with alternative I after all. It retains the promise of a 1/2 percentage point [reduction] and I think we might be risking more economic stagnation with a 1 percentage point promise. I find it congenial to go right down the line on alternative I. I don't think we need to worry about the M2

problem. The 7 to 10 percent looks higher; it is higher than our old 6 to 9 percent, again because of the farther drift that we have from the aggregates that we can control. I would have a very minor qualification if the Committee were to accept alternative II for any reason, and that is that I'd get rid of those quarter points. We're boxing ourselves in too closely using quarter points; it's better to have either 6-1/2 to 9-1/2 or 7 to 10 percent than to try to split it into quarters. I think that's foolish precision. So, I would come down with alternative I.

I wish I could agree with Fred Schultz that we could explain this once and not have to go over it every week. But as long as we have weekly money supply figures, I'm resigned to our fate of having to explain this every week. We're going to have to be prepared to use publicly both sets of figures; we should decide on the emphasis, though, right off the bat and then gear it each time to remind people who only look at these for 20 minutes on a Friday afternoon or whenever they pick up their papers. They will say: "Oh yes, I remember something about that." And then they will come back the next week and have forgotten all about it and we will have to say the same thing over again. I think we will have to do that. Even though it may seem to add confusion, I think it actually will add some clarification in the public mind.

MR. BLACK. Bob, do you mean that each week you would publish a figure abstracting from NOW accounts?

CHAIRMAN VOLCKER. I don't think we can do that.

MR. MAYO. I don't think we would do that, but we should indicate our caveat every week--the principle that's involved here.

MR. ROOS. Would it be feasible, Mr. Chairman, in view of the problem we will have in the next few months, to use that as a hook to suspend temporarily the publication of the weekly figures? Is there any sense in that?

CHAIRMAN VOLCKER. Well, let's not raise that subject right now. You're saying, Mr. Mayo, don't give these bottom row targets?

MR. MAYO. I don't think we need to go to the extent of giving the precise figures, but we should give some qualitative caveat every week when we publish the data as to what they mean.

CHAIRMAN VOLCKER. Mr. Corrigan.

MR. CORRIGAN. Mr. Chairman, on the presentational part, I think we have to try to get as much emphasis focused on the right-hand part of that table as we can. I agree very much with Governor Schultz on that point. On the substance, I come out for alternative I basically, partly because I'm not too concerned about this base drift either. After we get through, no one will be able to tell what it is. Also, I think alternative II really runs a risk of wrenching the [economy] too hard. I am a little concerned about the larger numbers on the ranges for the broader aggregates. I just wonder whether we couldn't look at M2 and M3 as 7 to 9 and 7 to 10 percent. That is a little narrower on M2, but I'm not sure that's all bad if Steve is right about the things that are happening there. I'm most concerned

about bank credit because, given what is happening in the economy and given that so many of our big firms are continuing to lose money and all the rest, there is going to be a lot of lending activity in banks [this] year. So, I would not be allergic to putting bank credit at 7 to 10 percent either. In sum, I would have the M1 ranges as they appear in alternative I; I'd take a chance on 7 to 9 percent on M2 and 7 to 10 percent on M3 and bank credit.

As for the presentational part, if I were you I might even be willing to go a bit further and come fairly close to committing to going back [to Congress] as early as April to try to explain what has happened and what these numbers might mean. If you do that, this idea that Bob Mayo had earlier might have some merit in the [period of] transition. That would be to try to use an average of the right-hand column for M-1A and M-1B--not as a firm target, but as a talking point. You could then say without a great deal of difficulty in communication that basically we're shooting for the average of M-1A and M-1B to grow within a 3 to 5 percent range during this period in which the transitional problem is the greatest. The 3 to 5 percent average, I think, does encompass the range of possibilities that we're thinking of in terms of the shift. And they are convenient numbers because even the upper end falls below the numbers that everybody has been looking at in terms of actual growth in the narrow aggregates for the past year. I don't know how it would work out in precise terms, but I for one would not be allergic to trying to use that handle as a way to get over the worst part of this transition, leaving open as I said the possibility of going back up there as early as April.

CHAIRMAN VOLCKER. Governor Teeters.

MS. TEETERS. I'm not really enthusiastic about lowering the ranges at all. We've been concentrating on page 6, but if you turn to page 7 it shows that the implied interest rates are extremely high. If we had to publish our projections of interest rates, we might have a different attitude toward this. Even with a 1/2 percentage point reduction, the economic outlook is extraordinarily bad. We've used every gimmick we could to get [the economy] not to decline, including shifts in demand for money and higher rates of velocity. All sorts of things could go wrong, and there's no room for any slippage at this point in that projection. But I see I'm all alone in not wanting to lower the ranges, so I could go along with taking them down the 1/2 percentage point. I would strongly support Governor Rice in saying that I don't see anything in this system that says we have to take the ranges down year after year. There is a certain amount of money growth that is necessary in this economy. If we keep this up, we're going to get to zero [money growth] and we're going to have five years of total stagnation if we commit ourselves to that course. So, I would support alternative I as stated in the Bluebook. If my memory serves me right, last year we didn't like the ranges on M2 and M3 that were said by the staff to be consistent with our range on M1, so we lowered them. And we missed them. I think the best judgment as to what are the most consistent numbers is that being provided by our staff. Even though [lower ranges for M2 and M3] look cosmetically nice, we could be sitting here a year from now with the same result: That we had cosmetically nice looking ranges and then missed them by the amount that the staff said we were going to miss. So, I strongly suggest that we take alternative I as specified.

CHAIRMAN VOLCKER. Is that what we did last year?

MS. TEETERS. Yes. What we did was to take the M-1A and M-1B choice but we didn't like the looks of [the associated] M2 and M3 ranges, so we lowered them. And then we missed them. We didn't take the staff's judgment as to what was the proper relationship between the M1 ranges and those for M2 and M3.

MR. AXILROD. I don't remember what happened a year ago on that. That may be the case. It certainly was the case in July that we were saying [M2 and M3 growth] would be a little higher than the Committee expected. I don't remember [the circumstances last] January.

VICE CHAIRMAN SOLOMON. Did we miss M2 by more than we missed the narrower aggregate?

MS. TEETERS. Yes.

CHAIRMAN VOLCKER. Yes.

SPEAKER(?). What was the [miss] again?

MS. TEETERS. We got 9.8 percent on a 6 to 9 percent range for M2 and 10 percent on a 6-1/2 to 9-1/2 percent range for M3.

CHAIRMAN VOLCKER. We'll improvise. [Unintelligible] if the figures are any good to start with.

MS. TEETERS. I would also say that we ought to concentrate on the right-hand side of the page, as I said earlier. We have a tremendous public relations problem. There are an awful lot of people with sharp pencils out there; the more we tell them what we know and explain to them where our uncertainties are, I think the better our credibility is.

CHAIRMAN VOLCKER. Are you saying announce the bottom line?

MS. TEETERS. Announce the bottom line. And I'd tell them just how uncertain we are about that bottom line. We could even put the calculations all on one side and show them where we made the assumptions and what the changes are.

CHAIRMAN VOLCKER. Governor Gramley.

MR. GRAMLEY. Mr. Chairman, I'd like to pick up on the thought that Ed Boehne laid out: That we ought to focus very, very carefully not just on the original perceptions that the public has of whether or not we've lowered our targets and your problems--and you're going to have plenty explaining this to the Banking Committees--but also on the perception of policy as the year develops. If we think we faced a credibility problem in 1980, we have seen nothing yet. It's going to be potentially 10 times as large in 1981. Consider, if you will, what will happen if we publish a range of 3-1/2 to 6 percent for M-1B. The first month of the year we had growth of 16 percent. It was 16 percent the first month! Furthermore, our expectation is that if we hit the midpoint of that range, the fourth quarter-over-fourth quarter increase will be 6-3/4 percent. If Ed Boehne is right--and I

strongly agree with him--we're much more likely to end up at the upper end than the lower end of that range. So the public is going to look month after month after month at an M-1B number that is growing, let us say, at 8 to 8-1/2 percent on average, while the upper end of the target range is 6 percent. I just don't think that's viable. The same argument in reverse is true with regard to M-1A.

So, if we're going to put out ranges, we really have to go for the bottom line. We have to tell the public these ranges are enormously uncertain but are our best guess of what we think actually will happen this year. This isn't just a matter of public perception. It is, as you indicated, a fact that we are going to be terribly uncertain ourselves as to what these numbers mean. And how the heck we can conduct monetary policy sensibly with monetary aggregates, when the monetary aggregates are just literally off the wall, I do not know. But it seems to me that Frank Morris has a good suggestion. As a minimum, we should put principal emphasis on the monetary aggregate that is least disturbed by these transitional phenomena that we're dealing with, which would be M2. I don't think we can drop M-1A and M-1B. I wouldn't go that far; I think we have to have some narrow money figures. But I would go for using M2, announced as our principal target. I think we ought to go with the staff range for that on page 6, and I would go for alternative I rather than alternative II. Looking at history, we find that broad money as presently defined in M2 has a rate of increase that tends to be 3-1/2 to 3-3/4 percent on average above the narrow money numbers. So I think we can justify that upward movement in the range for that reason. Additionally, when we're going into a period in which the attractiveness to the public of one element of M2--NOW accounts--is increased, that is going to attract some funds from elsewhere into M2, so we can justify it on that grounds, too. So, I would go with an M2 range of 7 to 10 percent, using that as the principal one, and using the ranges for M-1A and M-1B in alternative I with a statement at the bottom of the page instead of in the middle of the page. And I would use the left-hand side rather than the right.

MR. SCHULTZ. How we are going to get a consensus out of this, I don't have the faintest idea.

CHAIRMAN VOLCKER. Mr. Balles.

MR. BALLE. Well, like almost everyone else who has spoken here, as far as the takeoff point I certainly would use the actual growth rates for M-1A and M-1B that we achieved in 1980 and not try to correct for base drift. With respect to M-1A and M-1B, alternative I is what I would support. It does give credence to that very important perception problem that you've mentioned: We at least have in mind, abstracting from shifts, a 1/2 point reduction on those two ranges. I share Jerry Corrigan's misgivings about the M2 and M3 ranges being a little on the high side under that alternative I. As I look back on a table here showing the differences month-by-month and cumulatively between M-1B and M2 for last year, it turns out that there was a 3 percentage point spread, bottom line, net. It did fluctuate over the year; it bulged in the spring and since August the difference has varied between 2 and 3 percentage points. I'd be prepared to be generous, based on last year's experience, and allow M2 to grow by 3 points more than M-1B. Adding 3 points to the M-1B alternative I range would bring that to 6-1/2 to 9-1/2 percent versus the figures

shown under alternative I for M2 of 7 to 10 percent. I'd be fairly strongly inclined to reduce that a bit. It would have one advantage, among other things, of adding some credence to our gradual slowdown in the sense that if we specify a range of 6-1/2 to 9-1/2 percent as compared to the actual growth of 9.8 percent last year, at least the upper end of our range would be a touch under what we actually achieved in 1980. For much the same reason, I would reduce the M3 range by 1/2 point from the 7-1/2 to 10-1/2 percent shown under alternative I.

In terms of how to display the actual results versus the results we would announce, abstracting from [shifts], I think the first point is absolutely viable--that we do have something comparable to last year. As for how we get a translation device [for explaining] what is actually going on versus these ranges, abstracting from changes, it seems to me that some possibilities have been offered. I'm not prepared to recommend this yet without some more staff study and some comment on feasibility by Steve, but in the Bluebook there are two very interesting charts following page 9, which simply give the ranges abstracting from changes and those including changes. Based on my conviction that a picture is worth a thousand words, I'm simply suggesting the possibility as we go down the road month-by-month of showing those kinds of charts to the public as a means of explaining how to get from our announced ranges to the actual reported numbers. I'd put the actual reported numbers in the context of the sort of chart device that is used in Charts 1 and 2 following page 9 of the Bluebook.

CHAIRMAN VOLCKER. Governor Partee.

MR. PARTEE. I'm reminded that many years ago, after a difficult staff presentation, Bill Martin sometimes would say to the Committee: You better watch out or you may catch statisticitis! I'd say we've caught it. We have it in spades today. I really don't know how it will all work out. I don't want to direct myself to the presentational question because we're all over the lot and I really think what to do is your choice, Paul. I do think we ought to keep in mind two points. One is that we have said, and it will be expected, that we want to make some further progress in reducing growth in the monetary aggregates. Now, if you look at our progress, it hasn't been very rapid. And I see no great reason to expect that it will be rapid this year either. So, to follow up on our promise, I think what we ought to provide is minimal progress in reducing our expected growth rates.

The second point that I think is terribly important is one that Ed Boehne made. And that is that we are going to be judged by how we're doing relative to the targets that we've put out. As the year goes on, there will be more and more emphasis on how we're doing and less and less emphasis on how we picked the targets in the first place. So, I'm inclined to go pretty much with Fred Schultz. I think we ought to declare that in the interest of making further progress we are going to reduce the growth ranges 1/2 point. Then we would have to say that there are lots of adjustments because of all these complications that are occurring, so we are going to have to tell you what a 1/2 point is. And the 1/2 point reduction ought to be restricted to the M-1A and M-1B categories. Jerry's idea, or I guess it was Bob's, of averaging the two to give a sense that we haven't

really given away the ballgame on this is probably a useful concept to employ. On M2 and M3, I really do think we have to raise our ranges some. We can't go along with 1/2 point reductions there. The reason is simply that the relationship between the narrow aggregate and the broader aggregates is going to be determined by interest rate relationships among other things and there will be higher interest rates than ever were contemplated when we first specified this relationship a year ago. I would go halfway and make it 6-1/2 to 9-1/2 percent on M2 and 7 to 10 percent on M3. And I agree with Jerry: I don't see any reason to risk being low on bank credit; nobody pays that much attention to it. So, I'd make that 7 to 10 percent also because it's reasonable to think that it might be about the same as M3, which is the broadest of the institutional aggregates we have. But the main point is that we ought to declare that we are reducing our objectives. And we ought to do it in a way that gives us maximum opportunity not to go outside the ranges as the year goes on.

CHAIRMAN VOLCKER. Declare that we're reducing them but not reduce them?

MR. PARTEE. Yes. Well, who was that guy who said we ought to back the troop ships into Vietnam and declare we won, and leave?

CHAIRMAN VOLCKER. Mr. Ford.

MR. FORD. I would come out as follows, which is basically where Fred Schultz came out: First of all, I'd speak in terms of the unadjusted targets without all the [unintelligible] and I'd declare that we are going to make a further reduction in the targeted growth rates for both M-1A and M-1B as under alternative I. I frankly am not fully convinced that the rest of the adjustments in [alternative I] that the staff suggested tentatively would have to be made are really valid. On the face of it, they make it appear that we're not undertaking a reduction. And given all the questions about it, I think Nancy's point [is valid] that we would be running the risk of running the economy into the wall. I would make the opposite assumption looking at page 7, because I don't understand how the staff comes up with a reduction in the inflation rate and an increase in every interest rate, including the mortgage rate, as we go through the four quarters of the year. Going from the present high level of real interest rates, that means that real rates get even higher. That's why I think we have to take account of Nancy's concern, but not on the basis of the table on page 7. I'd be more inclined to think we might have better luck than that. If we actually do reduce the inflation rate, by the fourth quarter I think the rates on page 7 would be lower than in the first quarter rather than higher based on the notion that interest rates reflect inflation. So, to make me feel a little less worried about crashing the economy into the wall, I'd go with what Governor Schultz said about M2 and M3 and use 6 to 9 percent and 6-1/2 to 9-1/2 percent.

Finally, with regard to the explanation, you obviously have to go with however you feel most comfortable rationalizing it. I would consider one other alternative for explaining just how crucial this estimating procedure is and that would be a very simple form of sensitivity analysis. I would run it something like this: I'd say that in the first month of the year we had something like a \$15 to \$20 billion shift into NOWs. Our best guess--and I would call it that--is

that this [total] will double over the rest of the year. We could be off by a factor of over 100 percent in the growth of NOW accounts very easily. In other words, instead of going to \$40 billion, they could go to \$60 billion or even to \$80 billion. That would mean that you, the public, and you, the Congress, will be seeing horrible M-1B numbers that could scare the heck out of you but not reflect a real change in what we're trying to do. I'd put it that way and then take the best idea that I think has come up around the table--the idea that Presidents Mayo and Corrigan mentioned--that if something horrible like that were to happen, people would recognize that it would bring a big drop in M-1A and a big pop in M-1B and that we'd still on average be tightening. If I had to explain it tomorrow, that's the way I'd do it. But you have to do what you're comfortable with because you're the one who's going to be under the gun.

CHAIRMAN VOLCKER. Mr. Winn.

MR. WINN. Well, you have quite an expository problem. The only advantage I see is that now instead of targets [unintelligible] the Shadow Committee [unintelligible]. I think continuity in exposition requires that we keep our numbers in line with last year as a starting point. The only thing we can do honestly is to promise adjustments and information as it develops. I think we have to give them, for instance, what the adjusted range would be at the moment in order to compare it with the figures as they are published because that's what people are going to judge them by. And I think we have to be on record as recognizing that these targets are on the old basis--I don't see any way we can avoid that--and then promise that as adjustments and information develop you will be back to indicate what that means. To me the difference between alternatives I and II is really not as important as is the recognition that we still are faced with the problem of trying to reduce the ranges. I find alternative I acceptable. Because of the continuity and exposition problem, I'd reduce the M2 and M3 ranges at this point. We might have to go back and change that, however, as things unfold. So, I'd be inclined to start with alternative I [for M-1A and M-1B], with 6 to 9 percent and 6-1/2 to 9-1/2 percent on M2 and M3. For bank credit we probably have to raise the range a little in light of market developments.

CHAIRMAN VOLCKER. Mr. Boykin, you're left.

MR. BOYKIN. Yes, Mr. Chairman. Earlier in the meeting Governor Partee expressed some confusion. This being my first meeting, I hope you'll appreciate the dilemma I find myself in! If he's confused--

CHAIRMAN VOLCKER. You'll get more confused as you go on! Governor Partee has been around here for a while.

MR. BOYKIN. I have some sympathy for alternative II, much along the lines expressed earlier by those who were opting for that. However, I also think alternative I would be the better position to take, particularly given the uncertainties about what really is going on. It does indicate our willingness to continue the effort for restraint. So, I would be satisfied with alternative I and I would probably be willing to take the ranges the way the staff has proposed them all the way through. I also would stay to the left side of the

table and I would associate myself with Willis Winn's comments on how to try to explain it.

CHAIRMAN VOLCKER. Well, this morning we have a little coffee and orange juice.

SPEAKER(?). Hear, hear!

SPEAKER(?). We need it!

SPEAKER(?). We're going to need more than that!

CHAIRMAN VOLCKER. How about a little scotch this morning?

MR. SCHULTZ. You better provide something to sniff now!

CHAIRMAN VOLCKER. It's conceivable to me, since we're not yet at the short-term targets, that the meeting may continue after lunch a bit.

SPEAKER(?). Are we going to eat here?

CHAIRMAN VOLCKER. No.

[Coffee break]

CHAIRMAN VOLCKER. Where are our absentees?

SPEAKER(?). They're going to a shadow meeting of the Committee!

CHAIRMAN VOLCKER. I will accept the injunction to a considerable degree that the presentational problem is going to have to be decided by the Chairman when he testifies. I don't think there's any readily soluble way. The more I think about it, the more I think we have to give the public some indication initially, however tentatively, of the way the real numbers might or might not come out, just to give some flavor. The fact that they are way off--the jog at the beginning of the year--I am worried about. It makes the charts such as those in the Bluebook look not very good because we're so far off [target] right off the bat. Maybe we can defer being even halfway decisive about it, but I think we've got to give [the public] some indication. That is my current conclusion on that. I certainly think we have to show some reduction in the ranges, as I said at the beginning. But I guess I do look at these targets differently than some of you, or maybe all of you, look at them.

I think we accomplished two things this morning. In the decision we will give some flavor of the general direction in which we want to go [in setting the ranges in the future]; and that has to be down, consistent with everything we've been saying. But maybe more importantly in terms of how we come out in the remainder of the year, once having stated the ranges, they become something of a discipline on us. I'm not one who thinks that we have the capability of necessarily reaching all these targets all the time, not only on a month-to-month basis but even by year-end. You know, there's nothing magic about the final quarter of a year. We cite these targets and tend to look at them fourth quarter-to-fourth quarter. Last year we

happened to have had a high fourth quarter. If we looked at an average for the year as a whole, we came out within the target ranges; but since the focus is on the fourth quarter-to-fourth quarter period, they look a little high. It is quite possible, the way the figures are going now, that if one looked at it from the fourth quarter of '79 to the first quarter of '81, we would look comfortably within the targets that we set. Well, maybe not comfortably, but within anyway. It depends upon what happens for the next two months. So, I think we can exaggerate our control and the importance of being precise with the ranges. But I don't think there's any question that there is a discipline. That discipline operates, in my opinion, when we're in the vicinity of the upper end of the target range; the rest of the target range doesn't make much difference.

The way I observe what I've seen going on here for the last couple of days--I hope not completely unfairly--is that we were presented with a gloomy economic forecast by some standards. I could imagine a considerably more gloomy one, in fact. The staff doesn't have a real recession in this forecast but I don't think we could discount having something that would be called a real recession. That's not the only forecast one could have; one could obviously have a more ebullient one too. There is a general question, which I guess is the most important question, of how serious we are about dealing with inflation. I got a little feeling, as I listened to the conversation, that we're like everybody else in the world on that: Everybody likes to get rid of inflation but when one comes up to actions that might actually do something about inflation, implicitly or explicitly, one says: "Well, inflation isn't that bad compared to the alternatives." We see the risks of the alternative of a sour economy and an outright recession this year. So, maybe there's a little tendency to shrink back on what we say we want to do on the inflation side. I don't want to shrink back very far; that is my general bias for all the reasons we have stated in our rhetoric but don't always carry through on. The history of these things in the past, as we all keep telling ourselves, is that when we come to the crunch, we back off. In a general sense the question here is whether we should back off.

In terms of the general setting that we have, my own guess would be--and I suppose it can't be anymore than a guess--that almost any range we set that shows a reduction will be readily accepted by the Congress and the Administration and everybody else because we've said we're going to do that. Everybody has [understood] this little lesson that we've got to reduce the ranges in order to deal with inflation, and we're not going to run into a lot of flak in the short run about anything we're talking about or what has been set before us. I obviously can't be sure of that, but that would be my assumption. The only question I might get is: Why did you tentatively reduce the ranges only by 1/2 percentage point? I have not yet gotten the question: Why did you reduce them at all? I'm not saying that these people have thought this all through; I'm not suggesting that at all. But that is the common impression.

Now, in fact, what we're going to be doing is fighting the upper side of the range; talk about the midpoints and the lower end of the range may not be very relevant. But I'm not sure that fighting the upper end of the range isn't right where we should be if we're going to have a sour business outlook. People are going to be

complaining about Federal Reserve policy. It is not the worst position in the world to be in to say: Look, our only risk is that we're exceeding our range, not that we're down at the midpoint or below. If we're in the low part of a range or at the midpoint of the range and the economy is sour, we're sure to have everybody telling us that we have to ease up because we're not even exceeding our own ranges and the economy is awful. So, I do think there is an element of internal discipline and external explanation in assuming that the relevant part of the range will be the upper part of the range and not the midpoint or, certainly, the lower part of the range. The lower part of the range in my conception of the world is something we'd accept if some of these relationships go off; our instinctive judgment is that we wouldn't want to be all that easy in an ordinary sense despite the fact that the [monetary growth] figures were coming in low, given what is going on in the economy and what is going on in interest rates or whatever. We have a safety valve so we can say we're not below our range. But we will only be down there if [the economy is performing] in a "satisfactory" way. So, the crucial number here is the upper part of the range, and the forecast is based upon the midpoint. I don't sit here and assume, frankly, that we're going to be at the midpoint if the economy is going to be as bad as the staff has projected, much less if the economy is worse than projected. Indeed, if the economy is better than they projected, which implies a whale of a lot of pressure on interest rates, we'll probably also be at the upper part of the range. So, that's the relevant number we're talking about, not the rest of the range, unless something unexpected comes along and these numbers for some institutional or other reason happen to come in low when interest rates are declining and everything is going along more or less swimmingly.

We have a great preponderance of opinion for alternative I and for looking at it from the viewpoint of the left-hand side of the sheet that was given us, leaving aside the question of how it's actually presented. That gives us an upper end of the range of 5-1/2 or 6 percent, depending upon which one we look at, compared to an actual outcome last year of 6-1/4 or 6-3/4 percent. It's a reduction of something like 1/2 or 3/4 percentage point, depending upon which one we look at. I guess that's where we are. I would, if anything, make it lower than that rather than higher, again based upon the assumption that we're going to be flirting with the high ends of the ranges and not the low ends. I am somewhat comforted, on balance, but I don't know whether I'm more comforted than discomforted by the fact that we won't be able to tell with much precision where we are anyway, so far as the M1 figures are concerned. That does make M2 or M3 potentially more important, as a number of people have said. Let me assume that the staff forecast is more or less right about the relationship [between M1 and the broader aggregates], although there's bound to be a good deal of uncertainty about that; the amount of confidence one puts on that estimate is not enormous. But let me assume that's the reasonable assumption as to the consistency between the two. If I convert that into my own feeling that the more relevant issue is being at the upper end of the range rather than at the midpoint, that in itself makes me willing to go toward a tighter stated range in order to make sure that it is disciplining enough. We have the presentational problem of whether to raise one or both of those ranges. It's a purely psychological problem regarding what that does in terms of the imagery we are portraying at the moment. The

staff's best guess on M2 is that 8-1/2 percent is consistent with the midpoint of M1 in some sense. But at least with 8-1/2 percent you're saying that's your best guess consistent with the nominal GNP forecast, which is more relevant.

MR. AXILROD. Well, if you look specifically at the flow-of-funds data, it might come out to something like 8.8 percent. We've squeezed it down to 8-1/2 percent rather than up to 9 percent.

MR. PARTEE. So, it's really close to 9 percent.

CHAIRMAN VOLCKER. But it's consistent with the GNP forecast; that's more important than the M1 forecast in that respect.

MR. WALLICH. And the base drift in this is 2-1/4 points?

MR. AXILROD. On the M1s it's 2-1/2 points; on M2 I don't know the base drift. We don't really have that.

CHAIRMAN VOLCKER. I don't even know what the definition of base drift is. It depends upon whether you thought you were really aiming at the midpoint of the previous year and there's an error in that. Anyway, for the reasons I suggested, I would go below the 7 to 10 percent and 7-1/2 to 10-1/2 percent [shown under alternative I]. I'm not sure we want to go above where we were last year, but for the psychological or presentational reasons I don't like going as high as stated there. But I have no great compunction about announcing that we expect to be at the high end of the range--that we would be disturbed about being over the range but not at all disturbed about being at the high end of it--and that the low end of the range is only to take care of totally unexpected developments that might for some reason reduce the attractiveness of money market funds or whatever. We could get a development in the thrift industry such that they don't become more eager competitors for money market certificates, so that [lower end] was expressed for a variety of other contingencies that conceivably could develop. We have a pretty mixed view on this, I think. The Committee is pretty well split down the middle in the initial comments between a 7 to 10 percent group and those who prefer something less than that. There is a slight majority--seven--for less than 7 to 10 percent, just using the M2 number.

The only other comment I would make is that we will be announcing these targets a few days after the Administration is announcing its program. I don't know what that's going to be. I assume it's going to include Kemp-Roth for three years. I'm not at all sure it's going to include--my guess is it is not--a beginning date of January 1, 1981. I think it will be some time after that. And I do think they are probably going to have a bigger expenditure reduction number in the proposed program than conventional wisdom has assumed--conventional wisdom now and perhaps conventional wisdom after they announce it--is at all possible. But I suspect they are going to have a very big number in there and put a lot of emphasis on the importance of the changes they are trying to make in the structure of the budget and, therefore, in the American economy. The question is how our money supply numbers will play in connection with that tune--whether it will sound like we're doing business as usual or supporting the program or whatever. I don't know quite how that will play, but it is a psychological question.

I guess what I am saying is that if it's the great predominance of opinion that we go substantively, however presented, for what is alternative I in the Bluebook, I would suggest that we reduce the M2 and M3 numbers to some extent. The presentation would suggest that we would be near the upper end of the ranges. That is what I would propose. Presentationally, I think we have to give at least a tentative view and try to avoid getting it written in indelible ink in any way; I'd give a penciled-in tone for how the actual number may look. You know, we're going to have to report what the actual numbers are; and I think we have to give a target at some point relevant to the actual numbers rather than say that we can somehow adjust the actual numbers when we don't have a good enough handle to adjust them on a week-by-week basis. By the same token, we don't have a good enough handle to adjust the target on a week-to-week basis either. But I think that can be a little vaguer concept than a number we actually have to publish every week in print. Sooner or later we will be forced into giving a target that allows for the shift. My main reluctance about doing that at all decisively right now is that there's such a jog in the actual pattern of the numbers that come out right away. But I would, as I feel now, do it that way.

I've been playing around with just how we might present this and give some sense of continuity. There is a possibility. The problem is impossible, I hasten to say, because we really have three sets of numbers. We have numbers based upon what we were estimating last year, where we are now, and with further shifts [this] year. To give some sense of continuity in terms of the M1 numbers anyway, I was wondering whether we could take the cone we had last year, which is the conventional way to express these things, and adjust it for what actually happened to the numbers. That means that the actual figure is very close to the cone for the fourth quarter. We could take the top of that cone and extend it by whatever percentage we have decided on here. It would be extended in the case of M-1B by 6-1/2 percent--we'd have to go off the right-hand side of the sheet--and by 4-1/4 percent for M-1A, if [alternative I] is the decision we make. Then we would extend the bottom part of the cone by the same percentage and we would have created a channel which is consistent with the 4 to 6-1/2 percent target or the 1-3/4 percent to 4-1/4 percent target. But the cone would coincide with the channel by the fourth quarter. Thus we would have established a channel in which to operate with exactly the same upper end of the line as the cone. But the bottom end of the channel starts from last year's target rather than where we are at the moment. It's the same information; it's just presented in a different way so that we can link the one target to the next. I don't know whether one would call that base drift or not. It creates the same channel we had last year.

MR. SCHULTZ. Everybody who understands that raise their hand!

MR. WALLICH. That means basing [unintelligible] base drift. You're basing it on last year's targets and linking it up with last year's terminal points of the cone?

CHAIRMAN VOLCKER. That's what you do, yes.

MR. WALLICH. Yes. If you draw a channel for last year and a new channel for this year, that will not be a straight line. There will be an angle where they join.

CHAIRMAN VOLCKER. That is true. One of the difficulties with this portrayal is that there is an angle where they join. The angle is so small it is not perceptible to the naked eye. I don't know that it's worth lingering over this; it's a presentational matter. If we literally attached it to the cones with the current estimates that we're using, the actual is 1/4 percentage point above the cone. If we did it this way and we wanted to get in the channel, our effective target from the actual is 1/4 percentage point lower than the target itself would suggest.

VICE CHAIRMAN SOLOMON(?). But how do you explain it technically in words? It's a simple-looking cone I can see, but how do you put words around it?

MR. SCHULTZ ET. AL. He just did.

CHAIRMAN VOLCKER. Well, I'm not sure it's a good idea. One can go that far and it's fairly simple. I think I can explain that much very, very easily. What gives me pause is that then I'd have to say: "But that new channel I just gave you isn't the right channel because now we're going to get more shifts into NOW accounts." That's the real problem. This much can be explained simply.

MS. TEETERS. It sounds in fact more like 6-1/2 than 6-1/4 percent. Is that what you're saying?

CHAIRMAN VOLCKER. [Yes], if we literally did what I just described and did it from the cone instead of the actual and took the present estimates of the cone--we could change them--but if we accepted that one-third/two-thirds split instead of a 50/50 split. If we took a 50/50 split, it comes out that the actual is just about on the cone; if you take the one-third/two-thirds split, it is not. So, it would imply that we're going to make that up during the year and it would reduce the ranges effectively by 1/4 of a percentage point.

MS. TEETERS. You mean it will reduce the target by 1/4 percentage point?

CHAIRMAN VOLCKER. That's right. It would reduce the upper end of the target by 1/4 percentage point.

MR. PARTEE. Yes, it doesn't reduce the lower end.

CHAIRMAN VOLCKER. That's because the implication is that we would come back within the channel.

MR. BLACK. Mr. Chairman, if I understand what you're saying, it's what we originally thought about presenting to this Committee and decided it was so complicated we couldn't explain it.

CHAIRMAN VOLCKER. No, you took off on the midpoint, I think. This is a little different.

MR. BLACK. No, I'm not talking about what I said here.

CHAIRMAN VOLCKER. Oh.

MR. BLACK. What we originally thought we would do in the way of presenting charts is what you said, I think. I have some sympathy for it, but we decided we couldn't explain it to the Committee. But maybe we can explain it to the public. The public could--

CHAIRMAN VOLCKER. Well, there's nothing very hard about explaining it to the Committee if it wasn't for that last step. And what may make it impossible is that when you get finished with the explanation, you have to say this isn't the right channel anyway. That's really the problem; but any presentation has that problem. That's what makes the whole presentation impossible.

MR. PARTEE. Maybe you could go into the second stage with a shaded area added.

CHAIRMAN VOLCKER. That's right. We would have to put another shaded area on here. That's exactly what--

MR. MORRIS. At least we could do it for M2 and M3, Paul.

CHAIRMAN VOLCKER. Well, with M2 and M3 I don't think we can do it because they're too far out of the target.

MR. BLACK. What you have is a kinked two-year megaphone.

CHAIRMAN VOLCKER. That is it exactly. Right.

SPEAKER(?). But you can't do it, I don't think.

MR. CORRIGAN. With a dogleg.

CHAIRMAN VOLCKER. Well, that's a problem, too. But that is a presentational problem. If we presented it this way, we might end up deciding--this would have to be a decision--that we'd be willing to have a 1/4 point lower implied target for the M1s if we drew last year's cone with the one-third/two-thirds distribution. Am I right that if we do it 50/50, we're right on the cone?

MR. AXILROD. That's what I was just figuring out. Yes, it comes out that the rates of growth are exactly equal to the upper ends of the ranges.

CHAIRMAN VOLCKER. Well, without worrying about the presentation--anybody can have second thoughts--the substance, however it's presented, is that the majority opinion at least was that we should be 1/2 percentage point lower on the M-1A and M-1B ranges. Let's just look at that part of it first. Just what I would say, I'm not quite sure. But my opinion is that we're going to be near the upper end of whatever range we pick. That is, as I said, much more likely than anything else. In thinking about the ranges myself, I don't consider that a problem. I don't consider that a miss in any sense of the word and I assume that's what we're talking about. I'm not saying we couldn't be at the lower end if things evolved in a different way than the economic forecast suggests, with much lower interest rates or whatever other permutations and combinations might develop in the real world. I am simply saying that we would be

satisfied to be around the upper end of the ranges with an economic forecast of the kind presented. Let me just confine myself to M-1A and M-1B. As I say, my concern is that that's too easy, not that it's too tight. Do we have a consensus on that?

MR. PARTEE. Do you want a show of hands or something?

MR. WALLICH. I am troubled by M-1A and M-1B and more troubled by M2. It's not that I want to speak up now, but in combination it becomes very, very troublesome.

CHAIRMAN VOLCKER. Well, we'll approach this by partial differentials or something. I take it that people are willing to live with that 1/2 point reduction on the M-1A and M-1B ranges, with reservations depending about how we come out on the other parts and how it all fits together. We recognize that in the end it might be presented as on the right-hand side of that piece of paper, but someplace it's going to be presented both ways, I'm sure. I don't know whether we have to deliberate over the difference between M2 and M3. Let's assume that whatever we say for one applies to the other. There I would feel even more strongly that we're more likely to be flirting with the upper end than anyplace else and that the higher we put the upper end, the higher in fact we might be, given the kinds of problems that we foresee. How many do we have for 6 to 9 percent, which is precisely where it was last year? I better just take a poll of Committee members. Six. Who do we have for 7 to 10 percent? We must have a couple in the middle. Well, I would encourage a moment of discussion by somebody other than me--somebody who wants to be persuasive one way or the other.

MR. SCHULTZ. I would like to be persuasive on staying where we were last year. It seems to me, given all of the uncertainties, that we might as well get hung for a sheep as a goat here. This 1/2 percentage point doesn't seem to me to make that much difference, and if we go up from last year, I think we're going to get a lot of criticism. We will say: "Well, we're going to go down 1/2 point on M-1A and M-1B." And they are going to say: "Aha! But you're going up on M2 and M3." I just don't think it's that crucial; we are looking at a whole family [of aggregates], which I think is important. If we get outside the range on M2 and M3, that does exert some additional discipline. Most people continue to [focus] on M-1B, and I think that is the more crucial number; I don't think we help ourselves very much by going to, say, 6-1/2 to 9-1/2 percent on M2 rather than 6 to 9 percent. We would lose a lot in the presentation. I do think that the perceptions are crucial at this particular point in time, just as I think the perceptions of budget-cutting are crucial in the fiscal area. So, I would make an argument for 6 to 9 percent on M2 and 6-1/2 to 9-1/2 percent on M3, understanding that we're not only going to be at the upper end but that the relationships may be such that it's very difficult to stay below that upper end. I still think we're better off that way.

MR. PARTEE. The thing is that we were over [our M2 range by] quite a bit this past year--by 0.8 percentage point if the figure is right--and we're going to be over this year because, after all, we do have within that aggregate two pretty dynamic competitive instruments: the money market funds and the money market certificates. And the MMCs have some potential for further development as a market tool. I

might also say that we're in the hands of the DIDC because it could change rate relationships. Then who knows what might occur? I rather agree with you that it may not be worthwhile to confuse things. On the other hand, I think this is the one time when we can say: "Look, we have the relationships wrong between these aggregates growth rates; we had them wrong last year. We can't set each growth rate independently because they have complicated relationships with each other. Recognizing that and recognizing the close correspondence between M2 and GNP, and seeing that people are thinking in terms of a 9-1/2 or 10 percent increase in nominal GNP this year, we think we better have a range that would encompass what might occur. That's why we have a higher range." But I'm sympathetic with your point of view that a 1/2 point difference isn't much.

MR. SCHULTZ. And I'm sympathetic with your view, too.

MS. TEETERS. I'd take up on Ed's point. After all, we're not only setting ranges for perception. A year from now we have to figure out where we came in, and we ought to set something that we have some chance of achieving. In a presentation of foreign targets about two or three weeks ago, I noticed that the French did very well but they had an 11 percent target. I think it's better to be honest and to say, as Chuck is saying, that we misspecified these. Then we would have some chance to make it rather than put out a number that is too low, knowing that we're not going to make it.

MR. WALLICH. Well, 6 to 9 percent in a longer-term context is quite rich because we overshot the upper edge of the band by 0.8 percentage point, as someone said. That means we overshot the midpoint by 2-1/4 percentage points. That makes 11-1/4 percent the upper end, in effect, of the 6 to 9 percent. That's more than the nominal GNP growth that the Board staff projects. I grant you that anything can happen to M2. But there is going to be a temptation to rely on that very heavily because of the uncertainties surrounding the [narrower] aggregates. It seems to me that this is just giving the economy what it wants, like demand feeding. A more scholarly person, Bob Black, said it was the real bills doctrine: We just supply the money that the nominal growth of GNP demands. We ought to have some restraint built into this.

MR. GRAMLEY. May I take up on that point? The staff forecast with the 7 to 10 percent range for M2 is for an increase in nominal GNP of 9.6 percent and a decline in real GNP of .8 percent. Now, I think it's a question of whether we want to aim as our central point for -0.8 percent, or essentially -1.8 percent, for real GNP growth in 1981. Both of those imply restraint. The question is not whether we have restraint but how much. I too think, as Nancy said, that inevitably we're going to be leaning more on M2 as the year goes on to guide ourselves and to explain to the public what we're doing because M2 is the one aggregate that's going to be most robust under the kinds of institutional changes we're looking at. If we can get away with the presentational problem initially, I think we should go up to 7 to 10 percent as a more meaningful number for M2 if we lower the narrow aggregate ranges 1/2 point. We'll regret it later on if we don't.

MR. WALLICH. But 7 to 10 percent really means 9 to 12 percent or a little more than that.

MR. PARTEE. No, because we've already had the rest of it, Henry. You assumed in your discussion that we properly specified it a year [ago] and there's no reason to think we properly specified it. We know it has a very close velocity correspondence to nominal GNP, and it tracked it pretty well last year. It will track it again pretty well this year.

MR. MORRIS. But the staff's forecast assumes the 8-1/2 percent midpoint. It seems to me, along with the Chairman's suggestion, that the 9 percent ceiling would certainly be--

CHAIRMAN VOLCKER. The 9 percent encompasses the staff forecast.

MS. TEETERS. Just barely, by 0.2.

MR. PARTEE. By 0.2.

MR. GRAMLEY. But that is assuming essentially no rise in velocity. We could have a decline in M2 velocity for the year because of what is happening to the MMCs and the money market mutual funds-- the increased attractiveness of this particular aggregate relative to market securities because of NOW accounts. There are all sorts of reasons for thinking that might happen.

MS. TEETERS. Tony is trying to suggest that we widen the range.

VICE CHAIRMAN SOLOMON. As I suggested, I would widen the range by a point on each side, if we feel we can get away with it, in order to look neutral. If not, then I would have to come out for the 6 to 9 percent.

MR. PARTEE. Well, I think 5 to 10 percent is too wide. Maybe we can take 6 to 10 percent, but 5 points is an awfully wide margin. And we don't really expect to be below 6 percent, not with the possible accounts in that [aggregate].

VICE CHAIRMAN SOLOMON. My experience with that Congressional committee is that Fred Schultz is 100 percent right. What they're going to say is: "Look, you've lowered it a half point here and you've raised it a half point there; if you average them together, you haven't really done anything."

CHAIRMAN VOLCKER. That's the problem.

MS. TEETERS. But we've known since last July that the specification was wrong. If we have to change all these other specifications as drastically as we do, we better get this one right. Otherwise, we'll come up next year and say that we specified M2 wrong for two years running and now we're going to confuse the waters by re-specifying M2 in its proper relationship.

MR. CORRIGAN. I'm not entirely clear on this point that it is fundamentally misspecified. I think the numbers that John Balles was ticking off before work at least a little in that direction. Now, it's probably true to say, given everything in M2 and the fact that half of it is positively related to interest rates and the other half

is negatively related to interest rates, that it should be more stable. If anything, as I said before--although I really don't think it's necessary to do it--that might suggest that the band can be narrower and that we can more reasonably assume that it will come out somewhere near what the staff forecast implies. But I'm not entirely persuaded that it is structurally that far off the mark.

MR. GRAMLEY. If you take the past 10 years, the average annual growth rate of narrow money is 6 percent; the average annual growth rate of M2 is 9-3/4 percent.

MR. WALLICH. Well, if we misspecified last time, why not adjust both?

MR. CORRIGAN. But we've already corrected for it; we did all these redefinitions and things. We built a lot of that right back in. If you looked at it as you went along, you wouldn't find that.

MR. GRAMLEY. Not every year, no. It's awfully hard to argue that this year we ought to see a substantially narrower range of growth between M2 and the adjusted M1s.

MR. CORRIGAN. Well, if this NOW estimate that the staff is making here is right, maybe that's true. But if the NOW estimate is a lot higher than that--i.e. more comes from savings-type instruments, as Frank Morris suggests--then I think it works the other way.

MR. PARTEE. It won't reduce M2.

MR. CORRIGAN. No, but it will narrow the spread between--

MR. PARTEE. Yes, it will raise M-1B.

MR. CORRIGAN. Yes.

CHAIRMAN VOLCKER. Well, what we do about this depends upon what emphasis we put on the fact that we expect to be in the upper part of the range. One way of approaching that, I suppose, is to narrow the range instead of widening it.

SPEAKER(?). Or not have a bottom.

CHAIRMAN VOLCKER. Yes, or not have a bottom and just put down a number. We could say we don't want to see it exceed thus and so. But we could narrow it; I hate to have narrower ranges but I don't think we're going to hit the bottom of this one anyway.

MS. TEETERS. That's what we thought last year at this time, too.

MR. MAYO. Paul, does the President's program, which ostensibly is going to put money back in the hands of consumers who are going to save it, give more credence to the continuation of a 10 percent figure?

MR. PARTEE. Yes, he said half or more will be saved.

MR. GRAMLEY. He said half to two-thirds will be saved. We've got to accommodate that.

CHAIRMAN VOLCKER. You know, I hadn't thought of that. I don't know whether we have any rationale that this great increase in savings is going to push up--

MR. MAYO. He's going to have a program by the time you go up [to testify]. Do you agree with it or don't you agree with it? I don't know.

MR. MORRIS. It will be soaked up by the increased deficit.

MR. PARTEE. It has one chance in 100 of being true.

MR. MAYO. I'm afraid you're right, Frank.

MR. SCHULTZ. Then it gets us in the awful box of indicating that the FOMC agrees with that kind of number. We have some hard data on it now. A recent survey that was taken indicated that 26 percent of the people said they would save.

MS. TEETERS. They did that one time on a refund, too, and every bit of it was spent.

MR. PARTEE. Are they going to save anything?

MR. WALLICH. Will we know?

MR. SCHULTZ. Even that is a low number.

CHAIRMAN VOLCKER. If you took this decade's relationship of 3 percent [as the differential between M1 and M2] and we're setting an upper limit of 5-1/2 percent for M-1B, M2 comes out at 8-1/2 percent, which is within the 6 to 9 percent range. I would not suggest a 6 to 9 percent range if we thought M2 growth was going to end up at 7-1/2 percent because that is in all likelihood considerably too low. My problem is that I want this range to be a constraint on the up side.

MS. TEETERS. But the staff forecast is so close to 9 percent already that it means we're going to start constraining almost immediately.

MR. PARTEE. Well, if you think there's a really big advantage--I don't think there is--I'm prepared to vote for 6 to 9 percent and assume we'll exceed it.

CHAIRMAN VOLCKER. Well, before we get there, let me ask a question. If you had to guess, as a technical matter, between M2 and M3 which is more likely to be exceeded?

MR. AXILROD. I do not have a good guess on that. In the old days, one would have said the broader aggregate. But now institutions can compete actively in either aggregate. We have money market funds in M2 as well as M3. And we have money market certificates in M2.

CHAIRMAN VOLCKER. The difference is basically negotiable CDs and Eurodollars, [which are in M3], right?

MR. AXILROD. That's right. And in both aggregates there are [instruments] that institutions can offer aggressively or less aggressively depending on conditions. Equally likely would be my answer; I can't tell which.

MR. PARTEE. Equally likely.

MR. SCHULTZ. Or equally unlikely.

VICE CHAIRMAN SOLOMON. Do you think you're splitting--

CHAIRMAN VOLCKER. Well, they're already split. It's just a question of how much they are split. The staff has M3 1/2 percentage point higher. I don't know whether it's worth it, but we can compromise the position by moving one down more than the other.

VICE CHAIRMAN SOLOMON. Then we would be forced to say something about what we expect to happen because of large CDs.

MR. CORRIGAN. I think there is an argument--it's not a very strong one--for saying that M3 might be the stronger, simply because the prospects for a fair amount of term business borrowing are pretty strong. When you look at the auto industry and the steel industry and so forth, there's a lot of term big business lending going on. I think banks are more likely to try to fund that with CDs. That is compatible with some risk that M3 and bank credit could be toward the high side, as I suggested earlier.

MS. TEETERS. Actually, we exceeded M2 by more than M3. We could put them both the same.

MR. CORRIGAN. Well, last year we did.

MR. GRAMLEY. If we get a tax cut for business and it's retroactive to the first of the year, it's going to provide businesses with funds to finance their capital investment, and the mix of borrowing will shift toward government.

MR. CORRIGAN. If they stay with the idea of accelerated depreciation--I don't know if they will or not--the numbers I've seen on cash flow on that in the first year, even if it's retroactive, are pretty small because of the nature of the tax change. It's not the same as a change in income tax rates in terms of the cash flow effect.

CHAIRMAN VOLCKER. I think it will turn on the amount of bank lending, but I'm a little hesitant to predict whether that's going to be exceptionally big or small.

MR. SCHULTZ. It depends on what kind of budget cuts we get. If the market looks at the budget cuts favorably, we could get a situation in which corporations would be able to come to the capital markets to a greater degree. And, boy, they would do it! They're really sitting at the ready there.

VICE CHAIRMAN VOLCKER. Going back to something that Fred suggested earlier, we could have 6 to 9 percent now but say that given the institutional changes it might very well be that in July we would want to revise that on the up side.

MS. TEETERS. We're not notable for changing things in July.

VICE CHAIRMAN SOLOMON. Maybe we should change that; maybe we should be a little more changeable in July.

MS. TEETERS. Chances are that the only way to change in July is up and we'll go through the same argument about how awful it looks.

MR. PARTEE. At this time of high inflation.

MS. TEETERS. Don't forget, we're going to have a first-quarter CPI number that's possibly going to scoop the markets right out of their minds again. I think we're going to find it impossible to raise our targets after we've had, say, a 16-1/2 percent increase in the CPI in the first quarter.

VICE CHAIRMAN SOLOMON. I don't think any of us would be arguing this so strongly if we didn't all have a feeling that we will be focusing on this much more--that this is somewhat of a precursor to the kinds of debates we're going to be having at all the meetings.

MR. PARTEE. Let me be a little picky about this. We could have 6 to 9 percent now and then, assuming the tax cut takes effect about midyear--and as a matter of fact the staff has a higher personal saving rate for the second half than for the first half--we could then say that because we have had the tax cut we want to make a little allowance for that and we're going to raise the M2 range when we look at it in July. It might be--

MR. SCHULTZ. We assume that it's going into savings.

MR. GRAMLEY. The easiest time to do it is right now in expectation of that tax cut and to do it accompanied by a reduction in the narrow money ranges.

MR. MAYO. I think Lyle's right on that.

MR. PARTEE. Because we're surely not going to be cutting narrow money.

MR. GRAMLEY. I think Mr. Mayo's argument is an excellent one. It's a really good excuse. It's the best one, or the only one, I can think of. It's a stroke of genius. We have a tax cut coming along and it's expected to add to savings; and we've made allowance for it.

CHAIRMAN VOLCKER. Any port in a storm!

MR. GRAMLEY. Certainly that's not inflationary, is it? More savings? We're all for it.

CHAIRMAN VOLCKER. Well, my problem is this: I think 10 percent is too high. It's higher than we had last year, and I assume we're going to be near the top. Now, one can say 9-1/2 percent is a nice number, and in some ways it is a nice number. Is it worth it for a 1/2 percentage point to present a higher target than last year? That's my problem.

MR. GUFFEY. The answer is no.

MR. MAYO. The answer is yes.

MS. TEETERS. But we have all these excuses for changing them now, given the relationships.

MR. SCHULTZ. Let's save them all up and use them later.

MR. GRAMLEY. M2 has not received much focus.

CHAIRMAN VOLCKER. No, that's right; but I think it will receive more and more after this.

MR. GRAMLEY. Over time it will. But I think we can sneak in an increase in the M2 range now if we lean on the savings argument.

CHAIRMAN VOLCKER. We're talking not only about M2 but also M3. And in the popular view, we would be raising two out of the three targets.

MR. SCHULTZ. I don't think we can do that.

MR. AXILROD. Mr. Chairman, I don't know whether it's helpful but, in answer to Governor Teeters's question, we looked back at last year. The Committee essentially took what the staff had down for M2 and M3. It wasn't until midyear that the staff said the specifications were off.

CHAIRMAN VOLCKER. Just because it's interesting, do you have those numbers that Mr. Black was asking about earlier? This is really M1, but it's interesting. What page are those on in the Bluebook?

MR. AXILROD. Yes, they are on page 5. I can read the numbers as we have them adjusted for the so-called shifts. For M-1A for 1978, we have 7.8; for 1979, 6.5; and for 1980, 6.2. For M-1B, we have 8.0 for 1978; 6.9 for 1979; and 6.7 for 1980. Essentially for 1979 that reflects the shifts to ATS accounts and for 1978 some rough and ready adjustment for a sense of differences in trend of those two.

MR. MAYO. Wait a minute. I didn't follow why you adjusted 1978.

MR. AXILROD. Well, it's a bit obscure as to whether one should or shouldn't, so I wouldn't make too much of that.

MR. MAYO. Okay.

MR. AXILROD. It's much more clear in '79 and '80.

CHAIRMAN VOLCKER. We didn't make much progress last year on those numbers. We redistributed the progress that appears in the unadjusted numbers. That doesn't change--

MR. PARTEE. It's really better. I'd like--

CHAIRMAN VOLCKER. Well, it's pretty close. The weighted average is a little better on the adjusted, about 0.1 better. Well,

we have to make up our minds. We can try the 9-1/2 percent number. I think the real question is whether it's worth going to 9-1/2 percent, which in some ways looks better; but it is going to show an increase in two out of the three targets.

MR. PARTEE. How about leaving M3 at 9-1/2 percent? Have M2 and M3 the same at 6-1/2 to 9-1/2 or 7 and 10 percent, but leave them the same on the grounds that we just don't know how they--

MR. SCHULTZ. I thought you just mentioned that S&Ls are going to be selling CDs up to \$100,000.

MR. PARTEE. They can certainly try unless there is a set of questions about the solvency of the insurance corporations.

MR. RICE. Mr. Chairman, did you say two out of three of the numbers would be higher?

CHAIRMAN VOLCKER. If we go up [on M2 and M3]. I'm assuming at this point that we do with M3 anything we do with M2. When I say two out of three, I'm assuming both the M1 ranges are essentially one range. We could call it two out of four or two out of three. Well, how many like 9-1/2 percent?

MR. GRAMLEY. Better than what?

CHAIRMAN VOLCKER. Better than 9 percent.

MR. MORRIS. This is for what--M2?

CHAIRMAN VOLCKER. For M2 and the equivalent number for M3.

MS. TEETERS. Better than 9 percent, not preferable to 10 percent?

CHAIRMAN VOLCKER. Better than 9; that's right.

MR. RICE. But not better than 10.

CHAIRMAN VOLCKER. I understand. Not better than 10 percent in some people's view. How does that leave me? How many prefer 9? Seven and one. Well, the 9s clearly have it. That only leaves me with the question of whether we can attract more support by fiddling around here somehow. Let's assume we have 9 percent for M2, but not do exactly the equivalent, which I was implicitly assuming, for M3. Let me try 6 to 9 percent for M2 and 7 to 10 percent for M3.

MR. GRAMLEY. There really isn't a lot of usefulness in having an M3 target that's higher than M2.

MR. SCHULTZ. Yes, I think that's right.

MR. GRAMLEY. If the staff forecast is half right, over the next year the growth of business loans is going to be held down severely by the lack of inventory investment. That's in the approximate sense the most important thing that affects business loans. Without the business loans, the banks aren't going to borrow

unless there's a very big difference between the prime rate and market rates, and that's not very likely.

MR. ROOS. Mr. Chairman, for purposes of impacting the economy, is it important that we specify an M3 range?

MS. TEETERS. In a sense, basically that's a vote for a 1/2 point reduction in M1 and a full percentage point reduction in M2; and if we do the cones we get another 1/4 point off on M1. So, if you're going to vote for 9 percent, you might as well take a full percentage point off the M1 range. That's essentially what we are going to have to do in order to keep within the target for M2 because our only leverage is to push down on the M1s in order to retard M2.

CHAIRMAN VOLCKER. I don't think that's right.

MS. TEETERS. How are you going to get 1/2 point off M2?

CHAIRMAN VOLCKER. Well, it depends on whether you're looking at the midpoint or not. I'm not looking at the midpoint, frankly.

MR. PARTEE. No, Nancy means: It went up 9.8 percent last year, so why will it go up only 8.8 percent this year?

CHAIRMAN VOLCKER. Now we're talking about moving the M2 figure from 6-3/4 percent, where it was on this adjusted basis?

MR. AXILROD. Yes.

CHAIRMAN VOLCKER. --to 5-1/2 percent presumably if we're at the top; it's down 1-1/4 percentage points.

MS. TEETERS. That would be moving it down. That's a full percentage point. We're going from 6-3/4 to 6 percent--that's a 3/4 point reduction in M1--on the left side.

SPEAKER(?). What is nominal GNP?

CHAIRMAN VOLCKER. About the same as M2, about 9.9 percent.

MR. SCHULTZ. Mr. Chairman, I don't think we will accomplish anything by tinkering with M3, by differing that relationship 1/2 percentage point.

CHAIRMAN VOLCKER. I'm not going to attract anybody else?

MR. SCHULTZ. I don't think it holds together intellectually at all. If we fight the battle on the 6 to 9 percent, the 6-1/2 to 9-1/2 that means [unintelligible]. I don't know why that should please anybody particularly.

MS. TEETERS. Well, it doesn't hold together intellectually now. If we're going to take a percentage point off M2, then the 1/2 point down on M1 isn't consistent.

MR. SCHULTZ. I don't read it that way.

CHAIRMAN VOLCKER. You're implying more accuracy in the staff forecast than I think they can bear. Well, I think we ought to review this anyway. It's very likely that we might want to have a review if anything I consider really important happens that we don't know about at this point. We'd do that some time before February 19th, but I think we ought to have a tentative vote, which could be a final vote. If I interpret this correctly, we are voting on what is essentially alternative I for the M1s, presented however I deem appropriate at the time it's presented. And consistent with those changes, 6 to 9 percent on M2 and 6-1/2 to 9-1/2 percent on M3. On bank credit, Mr. Corrigan reflected some suspicion; I don't think it's too important whether we move that up 1/2 point or not. I don't know whether that makes anybody happier or sadder. Is there any feeling about that one?

MR. AXILROD. I ought to point out that that's the one range that was hit last year.

CHAIRMAN VOLCKER. Well, we might as well leave it then.

MR. SCHULTZ. I disagree with Mr. Corrigan's argument. My heavens, the likelihood is that the great need in the economy will be to reliquify. And any opportunity [corporations] get to go to the credit markets and get out of the banks, they're going to try to take, even at interest rates that are somewhat higher than they have been historically. So, I would feel comfortable about that bank credit number, Jerry.

MR. CORRIGAN. I'm not uncomfortable with it.

CHAIRMAN VOLCKER. So, the proposal is to leave the M2, M3, and bank credit ranges the same as last year and reduce the M1 ranges by 1/2 percentage point, with a definite explanation in the presentation that we expect to be near the top ends of the ranges on the M2 and M3 numbers. It would be encompassed in the explanation that those ranges are biased or asymmetrical.

MS. TEETERS. Why don't we do like the British do and just say we're going to exceed it?

MR. TRUMAN. They didn't say that in advance.

MR. GUFFEY. Does that statement imply that we'll be looking for the midpoint on M-1A and M-1B and the upper end on M2 [and M3] or the upper end of the range on all four of them?

CHAIRMAN VOLCKER. Well, in fact, we're probably going to be near the upper end of the range on the narrow aggregates, too, but I'm not sure I would state that quite so clearly.

MR. GRAMLEY. It seems to me that you could state your point on M2 a little differently and say that if in fact we get a significant volume of savings coming out of the tax reduction, it may well be that M2 would go up.

CHAIRMAN VOLCKER. I'd be willing to say that, too, but there's a difference in my mind. I think, in fact, that we probably will be near the upper ends of the ranges on the M1s. But their relationship with GNP is likely to be more erratic than the M2

relationship, and I would just point that out. M2 does track [GNP] more certainly; the velocity of M2 is probably a less uncertain animal than the velocity of M1, and that would be the excuse for making the statement. I would not exclude the possibility, certainly, that we'd be near the upper ends of the ranges on the M1s.

MR. GUFFEY. For the [Congressional] committee's perception or the public's perception we would be still looking at the midpoints of M-1A and M-1B, although we may know around this table that it's not too [likely].

CHAIRMAN VOLCKER. I would want to put some emphasis on the fact that if we were near the upper end, that would be in no sense a failure on M1. There's a difference between it being in no sense at all a failure if growth is at the upper end of the range and, in the case of M2, having an expectation that growth is a little more likely to be at the upper end of the range. That is the distinction I would make. Is that proposition clear? If no one has any further modifications to suggest, we might as well vote. The vote is subject to possible reconsideration.

MR. ALTMANN.

Chairman Volcker Yes

Governor Gramley Yes

President Guffey Yes

President Morris Yes, with a proviso that I do

not want to have any guideline for M1.

CHAIRMAN VOLCKER. It will be noted.

MR. MORRIS. I will accept the guidelines for M2, M3, and bank credit.

CHAIRMAN VOLCKER. You're not going to dissent from the decision?

MR. MORRIS. No, can't we just have a footnote?

CHAIRMAN VOLCKER. I would prefer to put it clearly in the record that some people accepted it in general, but didn't like the idea of a guideline [for M1].

MR. BLACK. The Act requires it.

MR. ROOS. The record would state that others preferred to target the M1s and forget about M2?

CHAIRMAN VOLCKER. Mr. Altmann will reflect all these views.

MR. ALTMANN.

Governor Partee Yes

Governor Rice Yes

President Roos Yes

Governor Schultz Yes

Vice Chairman Solomon Yes

Governor Teeters Yes, if I get a proviso in the

opposite direction that I think the M2 range is unrealistic.

MR. PARTEE. You would prefer a higher upper limit for M2?

CHAIRMAN VOLCKER. Well, there is no problem in reflecting those views in the record, but they won't be associated with individual names that way.

MR. ALTMANN.

Governor Wallich

No

President Winn

Yes

The vote is eleven for, one against.

MR. SCHULTZ. I want you to know that if the Mafia comes after me, I want you on my side!

CHAIRMAN VOLCKER. We're going to turn to the short-term decision, and we'd better turn to the exchange markets and do that part of our job. I don't know whether we can get these preliminaries out of the way before lunch. It looks as if we will indeed run after lunch unless you want a very late lunch. We might be able to finish by 2:00 p.m.; I can't see us finishing before that. Would you rather eat or try to finish by 2:00 p.m.?

UNANIMOUSLY. Eat.

CHAIRMAN VOLCKER. I understand what the relative priorities in this group are! Mr. Pardee.

MR. PARDEE. I will try to be brief. [Statement--see Appendix.]

CHAIRMAN VOLCKER. Comments or questions?

MS. TEETERS. Is this the first time the Germans have intervened in the dollar market?

MR. PARDEE. They've been intervening in bits and pieces all along when the rate moved sharply. But they have made a decision that they will act vigorously both in the exchange market and the money market to counter the selling pressures, and I think the market has sensed that. But we'll see how their follow-through is.

MR. BOEHNE. Have the Germans exported as much of their unemployment as they can, as they used to?

MR. PARDEE. No, I'm afraid this time most of the unemployment has [not] been exported. They didn't bring many people back. These are Germans who are unemployed now.

MR. SCHULTZ. I thought Ezra Solomon had the best comment I heard about that when he was talking about Switzerland. He said the great advantage the Swiss have is that when they run their economy into a brick wall they have a foreign employee in the front seat.

MR. PARDEE. The attitude of the Germans is that they can send the women back into the kitchen.

MR. TRUMAN. They probably still have about 2 million foreign workers in Germany, the more permanent ones.

MR. MAYO. Two million foreign workers still?

MR. TRUMAN. Around that or somewhat less than that. The peak in these numbers that I have here was 2-1/2 million in '73.

CHAIRMAN VOLCKER. Any other comments?

VICE CHAIRMAN SOLOMON. Well, normally I would be suggesting that we at least raise the authorization because we only have \$300 million left and it's a turbulent market. But I think some discussions are needed with the new team at the Treasury to get their views. I'm not quite sure of the legalities of this. If we have that discussion and they are sympathetic to our raising it, can that be done by a telephone call?

CHAIRMAN VOLCKER. It's only an informal limit, but presumably we would need a telephone call. It would take the Committee's concurrence, but we haven't had a formal vote on this, if I recall correctly. We'll get into this in a minute. Let me just see if there are any other general comments or questions.

MR. WALLICH. There seems to be a market view that the dollar can't fall and that that's why it's safe to take advantage of high interest rates. Do you see that continuing at these levels?

MR. PARDEE. I don't know. The dollar dropped almost 2 percent today and almost 1 percent in 45 minutes; I think we may lose that feeling very quickly. But, as I say, there has been this euphoria and a very strong feeling that everything the Germans were doing was wrong and everything we were doing was right. These attitudes can change very quickly.

MR. WALLICH. Yes, they can change very quickly.

MR. PARDEE. It's a very, very psychological market we're dealing with right now. It's very reminiscent of some of the things that we've seen ourselves when the dollar was weak.

VICE CHAIRMAN SOLOMON. The CPI in Germany went up what--a full 1 percentage point last month? I think the wholesale index went up 1.4 percentage point.

MR. PARDEE. It was 1.4. They're getting the vicious circle element.

VICE CHAIRMAN SOLOMON. The official forecast on the rate of inflation is simply that it's going to go up to about 4-1/2 percent, but the markets don't particularly believe it.

MR. WALLICH. I've heard 6 percent, but not officially.

MR. PARDEE. Inside the Bundesbank they're talking about a 6 percent rate, but the official [forecast] is 4.5 percent.

CHAIRMAN VOLCKER. Any other general questions or comments? Well, we are within \$300 million of [our informal] limit. I would be inclined to take a holding action and say--. Is that limit \$1-1/2 billion or \$2-1/2 billion?

MR. ALTMANN. \$2-1/2 billion.

CHAIRMAN VOLCKER. I'd stick another quarter billion dollars in there just to give us a little operating leeway. I don't know in any definitive way how the new Administration will feel about the Treasury's participation in this, but they haven't [expressed] any objection to what we have been doing. They are informed, and they haven't wanted to change it, presumably, at this stage. Whether they will or not, I don't know. But they haven't yet and it may be useful while we're meeting today to add another \$250 million leeway. Let me propose that. Do I take silence as acquiescence?

MR. PARTEE. Well, it seems hard to resist it when the rate is 2.15 and I didn't vote against it when it was 1.90. I didn't like it at 1.90, but I really do think we are going to be a product of a vicious circle here, too, if we don't watch out.

CHAIRMAN VOLCKER. We or the Germans?

MR. PARTEE. "We" because we will find that the rate just won't go back down.

MR. WALLICH. Well, it's more of a Thatcher syndrome in that we seem to be getting impatient that it isn't going down by the virtuous circle that we ought to be getting. But we are getting a 10 percent reappreciation of the dollar and I wonder what is going to happen to our exports here. If you're indifferent, I would have thought maybe a half billion dollars would be a better expression.

CHAIRMAN VOLCKER. Well, I said \$250 million simply because, without going very far, [we ought to] let the Treasury consider it at some point.

MR. PARTEE. We have \$300 million leeway, is that right?

CHAIRMAN VOLCKER. We have \$300 million now, so that's--

MR. PARTEE. So what we're really talking about is about a half billion dollars in operating leeway.

CHAIRMAN VOLCKER. It seems to me a reasonable operating leeway, that's all. If there are no objections, I will take that as an increase in the informal limit of a minimal size simply to provide operating leeway for the time being.

MS. TEETERS. Could I ask another question? Do the Germans have plenty of dollars to intervene with?

MR. PARDEE. Oh, yes. They have all those reserves they've amassed over the years. And they've been picking up dollars from SAMA. Every time SAMA wants marks, they go directly and--

MS. TEETERS. SAMA?

MR. SCHULTZ. Saudi Arabian Monetary Authority.

MR. PARDEE. We've had the odd situation in which both central banks were increasing their reserves at the same time over the

last few months. The Germans are very worried about the 30 billion mark current account deficit they expect for this year and how much of that they might finance out of their reserves. But they've been amassing reserves, as I say, until today when they really hit the market very heavily.

VICE CHAIRMAN SOLOMON. Does it show up as a reduction in their domestic money supply when they intervene to support the DM?

MR. PARDEE. Today's operation, yes. But they're doing so many other operations with the money supply that it's hard to say what the net effect would be.

CHAIRMAN VOLCKER. Do you have any other recommendations?

MR. PARDEE. I have no other recommendations now that we're clear on this one.

CHAIRMAN VOLCKER. We have to ratify the transactions.

MR. WALLICH. Let me just mention something in response to Tony's comment. I got a call from the Bundesbank in which they wanted to stress that they had not changed their policy relating to the provision of liquidity that you might have in mind as the counterpart to the intervention. It had to do with the ending of an earlier liquidity scheme of larger size; it was not to be understood as a change in their policy.

CHAIRMAN VOLCKER. Do I have a motion?

SPEAKER(?). So moved.

SPEAKER(?). Second.

CHAIRMAN VOLCKER. Without objection. We'll go to Mr. Sternlight who is going to have a short report before 1:00 p.m.

MR. STERNLIGHT. [Statement--see Appendix.]

CHAIRMAN VOLCKER. Before I forget, maybe we ought to ratify the transactions right now.

SPEAKER(?). So moved.

SPEAKER(?). Second.

CHAIRMAN VOLCKER. Without objection, they are ratified. Are we going to have a lot of questions on this? Who knows? Let's spend five minutes and see whether we can dispose of comments or questions in that time. Who has a comment or question?

MR. SCHULTZ. With that kind of entrance, you may get by with none at all!

CHAIRMAN VOLCKER. Well, it was an interesting period. I don't mean to shut off discussion. Is everybody satisfied? Well, we will come back from lunch and have Mr. Axilrod present the short-range targets. I wonder if we can get back here by, let's say, 1:40 p.m.

[Lunch break]

MR. GRAMLEY. I have a poem [about] what could easily make it all wrong:

Let's rely on the broader definitions
While eyeballing the level of rates
And pray that the economy does not suffer
The worst of all possible fates.

MR. SCHULTZ. What I don't understand is why you read that to those of us who are here. You should have read it to the ones who weren't here. Punish them!

CHAIRMAN VOLCKER. We have carefully observed, as I said earlier, everybody's arrival time. Mr. Schultz was not among the early ones! We've already made the decision, but I wanted to note that this is Bob Mayo's last meeting and he has rendered valued service through the years and we're [unintelligible].

MR. MAYO. The highlight of my career at this table was summarized by Mr. Gramley in his inadvertent remark this morning that I had made a remark that was that of a genius. And I'll go home with that thought!

CHAIRMAN VOLCKER. I understand that you're going to be here at the time of our next meeting--if not at the meeting, in the surrounding area--and we will duly note the occasion. Mr. Axilrod.

MR. AXILROD. [Statement--see Appendix.]

CHAIRMAN VOLCKER. Just to make sure we're clear. All these numbers you're talking about are not real numbers. They're numbers that exist in your head.

MR. AXILROD. Well, they have a certain reality in that--

MR. SCHULTZ. Insofar as your head does!

MR. AXILROD. I won't give you my wife's comments on that!

CHAIRMAN VOLCKER. But they are adjusted numbers, as best one can adjust them from the estimates we have of the shift. The actual numbers will look different from this.

MR. AXILROD. That's right. The actual numbers are charted and are given in parentheses in the detailed tables on page 10 of the Bluebook.

CHAIRMAN VOLCKER. But the actual numbers themselves rest upon particular assumptions about shifts.

MR. AXILROD. That's right, assumptions about the amount of shifts and the percentage of shifts. The assumptions are that in February the amount of shift will be something on the order of \$1-1/2 billion and in March about \$750 million and that the percentage out of demand deposits is something like 70 or 75 percent.

CHAIRMAN VOLCKER. We're obviously now in a difficult period where assessments have to be made about the amount of shifting to track these figures at all, so far as M1 is concerned. But apart from that difficulty I suppose the question that is raised is one of tactics. That is, are we relatively satisfied for a while with a shortfall from the target that was just established in the interest of a better possibility of hitting that target for the year as a whole in whatever contour [emerges] in connection with tax cutting programs or whatever. As with the economic projection, there is also, I would think, some consideration of the fact that in the last two quarters we overshot by a significant margin. And any undershoot from the annual target has to be assessed not only in the light of what we want to do next year but in the light of the overshoot in the most recent period.

MS. TEETERS. Which one of these alternatives is built into the economic forecast?

CHAIRMAN VOLCKER. Well, the economic forecast doesn't rest on these quarterly figures that we have.

MR. KICHLINE. No, it doesn't. There just are no significant differences in the first quarter that really matter. Our forecast is built on the four-quarter path for the year.

MR. PARTEE. I think "C" would make a difference. I don't see much difference between "A" and "B," but "C" would imply significantly higher interest rates in the short run.

CHAIRMAN VOLCKER. I wonder a bit. Nobody knows about the interest rate forecast associated with any of these numbers. There seems to be some tendency for interest rates to decline during the period when money supply growth on balance has been negative.

VICE CHAIRMAN SOLOMON. I'm surprised at the difference in the fed funds range between alternative "B" and alternative "C." There is only a 1-point difference, given a rather substantial difference in the target.

MR. AXILROD. Those are differences in [end] points. I think within the ranges we'd expect it to end somewhat differently. We didn't really center these exactly; that is, in "A" the funds rate is already at 17 or 17-1/2 percent and could go down a bit from there, although we are a little skeptical about that. In "B" it looks to us as if it could go up a bit, and in "C" we think it could go up much more toward the top of that range. So, those are just notional and they weren't precisely centered.

CHAIRMAN VOLCKER. Well, in accordance with our earlier discussion, I think we should have a little discussion of what these targets mean for where we're setting the operational nonborrowed reserve target--or looked at the other way around, the immediate figure on borrowings and in the light of any movement in these numbers how we might react. With all that preliminary, would someone like to say something?

VICE CHAIRMAN SOLOMON. Are we going to get the initial borrowing assumptions that are compatible with these three alternatives?

CHAIRMAN VOLCKER. Well, let's talk about the alternatives first and then talk about the borrowing assumption.

VICE CHAIRMAN SOLOMON. My initial feeling would be something between "B" and "C." I think that to some extent we should accept the shortfall, but I don't think we now have to accept it completely. My guess is that we would have a better chance of keeping interest rates roughly constrained and not going any higher if we had something between "B" and "C." I think we are showing enough restraint, and that would give us a little safety margin for later in the year.

MR. GRAMLEY. If I understand correctly what is in the Bluebook on page 14, both "B" and "C" could likely result in some upward pressure on interest rates, though "C" more so than "B." And I don't see why we would want to adopt an alternative at this point that would result in upward pressure on interest rates, given the anticipation that the monthly pattern of economic activity will be weakening in the course of the first quarter.

CHAIRMAN VOLCKER. The only problem with that is that I don't believe that forecast; I have reservations.

MR. GRAMLEY. I'm not certain about it, but it's close to my own prior view of where the economy is going to go in the first quarter.

CHAIRMAN VOLCKER. The interest rate forecast is derived from some quarterly forecast, isn't it?

MR. KICHLINE. It's a quarterly-average forecast.

MR. AXILROD. In essence what we're saying is that we'll have a very substantial velocity [increase] in the first quarter on average and that it looks as if that would require pressure on rates.

CHAIRMAN VOLCKER. I understand that, but it seems to me that whatever velocity increase we're going to get we've already gotten, so to speak, if we look at monthly figures.

MR. AXILROD. Well, the only answer to that--it may not be convincing--is that there's a lot of money that was in effect taken out of the economy in December, so there's some sense that you have to put that back on a month-by-month basis. But [what is put back] doesn't give us very much on a quarterly average, or as much as it seems, because so much had been taken out in December.

MR. KICHLINE. In response to Governor Teeters's question, the explicit path built into the forecast is 3 percent for the first quarter, which is very close to "A" or "B." But in terms of economic effects, since we are constraining the forecast to 4-1/4 percent over the whole year, if it's lower in the first quarter we assume that will be made up later on so that we don't get substantial economic effects for the year in total.

MR. PARTEE. Why is it, Steve, that the aggregate targets are so [disparate]? Ordinarily when we look at alternatives "A," "B," and "C," we see something close to an equal distance between them. And in

this case the difference between "B" and "C" seems extraordinary, particularly in view of the interest rate ranges.

MR. AXILROD. That's because what I did with alternative C, Governor Partee, is to say that this is what the Committee adopted last time from December-to-March, a 4-1/4 percent rate for M-1A.

MR. PARTEE. Oh, I see.

MR. AXILROD. It's an option that says: Forget about the December shortfall and then just go ahead with that target. The base fell rather radically. What alternative C in essence does is to forget about that sharp drop in the base. The other two, in effect, make up for the drop in the base, though not entirely because they're based on the midquarter. But they get you back to the midpoint of the longer-run range you adopted. Alternative C was just taking literally the percentage increase, forgetting about the December shortfall and asking: Where does that leave you?

CHAIRMAN VOLCKER. Last time we did say 4-1/4 percent or less basically.

MR. AXILROD. Yes.

MR. GUFFEY. There's another explanation there, Steve, in that alternative B relates to alternative II, which had the lower ranges. We did not adopt those ranges. So you're talking about something between "A" and "C," but not "B" as consistent with what we adopted on the long run.

MR. AXILROD. Well, alternative A gets to the midpoint of the ranges you've adopted. We constructed alternative B to be at the midpoint of a tighter [set of ranges], and alternative C had the rationale that I mentioned. But the Committee's decision today doesn't have to be based on those rationales, of course; it could be based on an idea that you might want to be short or not.

MR. GUFFEY. In response to Governor Partee, though, "A," "B," and "C" are not consistent numbers. "B" relates to alternative II, the tighter one.

MR. AXILROD. They had divergent rationales. They weren't done in the usual way where here's a midpoint--

MR. GUFFEY. Yes, right.

CHAIRMAN VOLCKER. Does anybody else have a suggestion here? Mr. Boehne.

MR. BOEHNE. I find "C" too restrictive for my taste, given the implications for higher interest rates. I'd like to drag my heels some, though, in terms of getting back to the path alternative A implies. So, that puts me in the neighborhood of "B." But I agree with Steve in that I don't think the Ms mean very much in this period. They have some marginal value. So, I would have a federal funds range of 15 to 20 percent in the directive, start the period about where the funds rate is now, and if it looked as though the funds rate would

have to go outside a 16 to 19 percent effective range, then I'd have a consultation.

MS. TEETERS. But one of the problems we have here is that those six months are when we're going to get the most fiscal restraint; we will be getting the full impact of the windfall [from lower prices on] oil plus the sharp increase in social security taxes. If the tax cut comes through, it would seem to me that we'd want our restraint more in the second half of the year than in the first half when the economy is already headed down. I find the upper limits of these ranges very unacceptable anyway. But given what we know is going on, it seems to me that we should be somewhat looser during the first half than we are in the second. That would lead me to alternative A with a lower funds rate range, maybe 13 to 18 percent.

CHAIRMAN VOLCKER. Who else?

MR. PARTEE. I think I'd go for "B" just as it is.

MR. SCHULTZ. I think I would, too. But my feeling is that if we do "B," a funds rate range of 14 to 20 percent rather than 15 to 21 percent is going to be more--

MR. MAYO. I agree with that.

MR. PARTEE. Well, I don't really have any way of judging that, Fred. After all, we are going to be providing reserves on a schedule for the market. It seems pretty close to an even position right now; that is, we have a hint that there may be a decline but we don't have much evidence. It could be reversed and in the meantime prices are going to go up faster, so nominal GNP could be pretty strong. I think there's about as much chance that the aggregates will come in stronger than our path as that they will come in weaker, so essentially it would be a fairly neutral option. With the funds rate at 17-1/2 percent now, one could argue for 15 to 20 percent, as Ed did. I wouldn't constrain it, though, with a telephone call because we're only talking about a 2-1/2 percentage point move one way or the other from where we now are.

CHAIRMAN VOLCKER. Mr. Winn.

MR. WINN. In this wonderful world of exposition that we're faced with, are you troubled by the imaginary targets that we're setting out and then an imaginary short-term target that's above the ranges that we prescribed? That seems to me to become a difficult problem.

CHAIRMAN VOLCKER. I worry about it literally.

MR. WINN. That's why I'd like to come in at least between "B" and "C." I'd put a restraint on the funds rate being over 20 percent instead of--

MS. TEETERS. We're well below target at the present time. We're well outside of the range.

CHAIRMAN VOLCKER. You say we're well outside of the range. Where are you measuring it from? We were too high in the fourth quarter; we now look a little low only because December was low.

VICE CHAIRMAN SOLOMON. January is showing good growth.

MS. TEETERS. Depending upon your assumption about the shifts.

CHAIRMAN VOLCKER. Mr. Corrigan.

MR. CORRIGAN. I am comfortable with "B" or something slightly less than "B." But I have one question to Mr. Axilrod. When you construct the nonborrowed reserve path, you effectively will have to do that off the numbers in parentheses in Table 10, right?

MR. AXILROD. That's right.

MR. CORRIGAN. So, no matter what we pick in terms of a path, the pressures on the funds rate that we will see or not see in this interval may be more directly a function of the accuracy of these estimates than anything else.

MR. AXILROD. Well, when the estimates turn out to be wrong, as they did of course after December, some of the degree of error ought to be compensated for by multiplier adjustments so to speak. That is, if there is a lot more money coming from savings accounts into NOW accounts, which have higher reserve requirements, we should be adjusting the path for that so that we don't get inadvertent tightening and vice-versa.

CHAIRMAN VOLCKER. I don't think we have any alternative but to rely upon whatever estimates and changing estimates the staff may make as we go along. I don't have great faith in their estimates, but I wouldn't have any more faith in any estimates that we try to make up here. I think we're just stuck with that. It may make us a little more sensitive to wide gyrations in interest rates; we may at least want to use that to a small extent as an indicator. Governor Wallich.

MR. WALLICH. I'd like to start the year off right.

MR. SCHULTZ. [Unintelligible]. Now we're going to get "D!"

MR. WALLICH. No, I just don't want to exceed our targets with an early set [of ranges that are above them], so I'd like to come in a little lower than "B."

CHAIRMAN VOLCKER(?). A little lower than "B"?

MR. WALLICH. Yes, somewhere between "B" and "C" in other words, but with 16 to 22 percent [on the funds range]. I'm asking a great deal.

MS. TEETERS. Just a floor.

MR. WALLICH. "B" to "C" or sort of "B minus."

CHAIRMAN VOLCKER. Mr. Guffey.

MR. GUFFEY. I would join those who prefer something between "B" and "C." The problem is complicated as far as I can see because of the very sharp one-month drop in money growth in December. It rebounded in January and we had about 6-1/2 percent growth, which is above the long-run target that we just established for 1981. If you look at "A," for example, the money growth that we would have to have on a monthly basis to get back to our 4-1/4 percent growth by the end of March involves very large figures. The same is true of "B." It seems to me that we shouldn't [go that fast]. [My prescription] represents what we have done in the past; we've tried to [make up] about one-third of the [way each month, taking three months] to get back to the midpoint. I would suggest that we get back to the midpoint by April or sometime beyond.

CHAIRMAN VOLCKER. I suspect in this connection that you have worked out here someplace--these are monthly figures on page 9--what the implied quarterly average is?

MR. AXILROD. Well, they're all relatively low. Those numbers are in the table on page 10 on the bottom line.

CHAIRMAN VOLCKER. Right, they are low.

MR. PARTEE. Because of the profile.

CHAIRMAN VOLCKER. That's right; it's because of December being low. What we might do is think of it as an average of those two figures.

MR. AXILROD. That would be a better way to look at it.

CHAIRMAN VOLCKER. That works out fine. [Unintelligible] the average is high, and if you look at the quarterly figure, it is low.

MR. GUFFEY. Well, just to conclude, I have one other point. If we were to adopt "A," for example, or even "B," we would get back close to the midpoint by the end of March. And if we're going to hit the targets we've established for 1981, then we'd have to drop the monthly growth rate of around 6 to 8 percent--8 percent under "A"--back to 4 or 4-1/4 percent. That would really be putting on the brakes again at the start of the second quarter. It makes more sense to me to take another month or so to get back to the midpoint rather than to try to reach it by March as represented by "A" or "B." So, I'd favor someplace between "B" and "C," with the federal funds rate probably in a range of 15 to 20 percent. I agree with some of the comments around the table in that I have little confidence in the interest rate projections in the Bluebook.

CHAIRMAN VOLCKER. Are you suggesting a funds rate range?

MR. GUFFEY. 15 to 20 percent.

CHAIRMAN VOLCKER. 15 to 20 percent.

MR. PARTEE. That rule of one-third [of the divergence] a month for three months, which we did discuss at some length yesterday, is a very reasonable point, Roger. What would that mean in terms of getting back, Steve? Have you figured it out? You'd have to take a

little off February and March, I presume, on alternative B. On alternative A you'd have to take a little off because "A" gets us back to the midpoint, right?

MR. AXILROD. "A" got back to the midpoint within 3 months.

MR. GUFFEY. Taking January [M-1B growth] at 6-1/2 percent.

MR. PARTEE. We wouldn't want to think of that as a regular [procedure], though.

CHAIRMAN VOLCKER. Who else? Mr. Morris.

MR. MORRIS. I'd buy going between "A" and "B."

CHAIRMAN VOLCKER. Between "A" and "B"?

MR. MORRIS. I mean between "B" and "C," as Roger indicated, with a funds range of 15 to 20 percent. With the economy softening, I don't think it would be suitable at this stage to indicate that we are moving the interest rate range up. The only number I understand in that is the M2 number. Assuming the economy cooperates with us, which I don't think it will, that would mean 8 percent on M2, which is not bad given the range.

MS. TEETERS. What is the funds rate range now?

MR. MORRIS. 15 to 20 percent.

MS. TEETERS. 15 percent with no top.

MR. MAYO. The top is 20 percent.

MR. MORRIS. It's 15 to 20 percent, so we wouldn't be making any change.

CHAIRMAN VOLCKER. Who else? Mr. Balles or Mr. Mayo.

MR. BALLE. Just a quick question, if I may, to help me make up my mind. This is a question to the staff, Steve. Have you seen, or do you have any opinion about, the assertions in the financial press by some commentators and money watchers that the December drop was not a real drop--that financial institutions were misreporting to us? The [alleged] scenario is that both banks and S&Ls were getting cranked up to issue NOW accounts, which weren't legal until the first of the year, and were making moves internally to take things out of savings accounts but hadn't yet classified them as NOW accounts and were calling them in reports to us "other liabilities." I don't know whether that has any merit in reality. I'm asking you.

MR. AXILROD. Yes, I have heard of that. I don't believe we have noticed any substantial increase or change in the other liabilities category, but I haven't inspected that personally. We have not found any real evidence of something like that going on. But [money supply] behavior in the last two weeks of December and the first week of January was rather odd; my inclination has been to throw those three weeks out and start [comparing] recent weeks of January

with where we were because they did drop sharply and then rose sharply. There was a very big increase in M-1A after adjustments.

MR. BALLEES. I thought you might have had a chance to look at the trend of the so-called other liabilities that came in.

MR. AXILROD. No, I just can't answer that directly. We didn't find anything, but there is this peculiarity of the deposit data that we think is just a bad seasonal. But we have to look elsewhere.

MR. BALLEES. Well, with that uncertainty, I guess I would come out where several others have already, between "B" and "C."

MR. GRAMLEY. When people say between "B" and "C," there is such a large gap between them--

CHAIRMAN VOLCKER. Let's get to that at the next stage. Do you have a federal funds opinion, Mr. Balles?

MR. BALLEES. 15 to 21 percent.

CHAIRMAN VOLCKER. Mr. Mayo.

MR. MAYO. Well, since I'm the oldest person around the table, I'll brag that some 50 years ago I learned for the first time that the square root of -1 is an imaginary number. It was only when I arrived at this table that I really learned what imaginary numbers are all about! I think we should repeat our humility that we really don't know what we are doing on any of these alternatives and that the best we can do is to take the staff's very loose translation here and play with it, granting that by next week there may be a different set of numbers. I think we have to do that in this particular intermeeting period; our only refuge is really the way the federal funds rate behaves regardless of how much bowing and scraping we do about the aggregates. Having said that, I come out also shading "B" toward "C." Just to start that discussion going, I'd say 5-1/2 percent for M-1A and/or M-1B, 8 percent for M2, and 14 to 20 percent for federal funds.

CHAIRMAN VOLCKER. In all this talk, which I share, that we can't interpret these figures with precision, let us not forget that we can't interpret them with precision even when the numbers are not distorted. We have a plus or minus 10 percent error anyway, so we are only slightly worse off in some sense than we ordinarily are.

MR. MAYO. Well, we could vote on whether we are 10 percent or 20 percent worse off! That would be further expression--

CHAIRMAN VOLCKER. Mr. Black.

MR. BLACK. Mr. Chairman, I would favor "B." That's the alternative that would have gotten us to the midpoint of alternative II, which I favored. Since the Committee voted for alternative I, I wouldn't want to go quite to the midpoint of that. So I'd stick with "B." And I think there's a great deal of merit to keeping that federal funds ceiling at 20 percent. I haven't much sympathy with ceilings but I don't think this is the time to raise it.

CHAIRMAN VOLCKER. Mr. Roos.

MR. ROOS. I would lean toward either alternative A or alternative B. I don't feel strongly enough that I would be passionately opposed to "C." But we should remember the experience we had in the early part of last year when we permitted the aggregates to drop from a rather high rate of growth down to a significantly lower rate of growth. We had M-1B growth over the second half of last year of something like--I don't know exactly--12 to 14 percent, and we are jamming it down even with alternative A to a significantly lower rate. In my way of analyzing the effects of changes in the growth of the aggregates, I am impressed by research that we've done that shows that when we have an abrupt drop in the rate of money growth from a higher pace to a lower pace and hold it there, that does have a very negative effect on output and can precipitate a recession. And it usually does. I think we should really try to avoid unseemly fluctuations in these aggregates. I would intellectually lean toward the less restrictive of "A" or "B," but I wouldn't go to the mat on any of these three alternatives. I do feel that the fed funds rate range, short of this Committee overwhelmingly going to a broad range of 1 to 20 percent, should be as broad as possible. I'd opt for 14 to 20 percent to keep it broad.

CHAIRMAN VOLCKER. Governor Rice.

MR. RICE. I would go with alternative B. That alternative seems to be fairly consistent with the longer-range targets that we adopted, which came out to be someplace in between alternatives I and II. Alternative B promises to get us back to the midpoint of alternative II by March. So, I would go along with "B" and a federal funds range of 14 to 20 percent.

CHAIRMAN VOLCKER. Who are we missing? Mr. Ford.

MR. FORD. I'd go with "B" and keeping the fed funds rate in a range of 14 to 20 percent.

CHAIRMAN VOLCKER. Who else is missing? Mr. Boykin.

MR. BOYKIN. I would go with "B" with the fed funds range shaded to 15 to 20 percent.

CHAIRMAN VOLCKER. Somebody else is missing here. Whom did I not count?

MR. SCHULTZ. Yes, I said what I wanted.

CHAIRMAN VOLCKER. I guess that's right; I don't have [Mr. Gramley].

MR. GRAMLEY. I would go with "B." I would be willing to live with some shading on the down side of "B," if that's the way others vote. I wouldn't push interest rates down deliberately to get numbers as high as "B," if they came in below that. But I wouldn't like to see interest rates go up in an effort to try to squeeze the growth rate down much below "B."

CHAIRMAN VOLCKER. Where are you on the federal funds range?

MR. GRAMLEY. The 15 to 21 percent range is all right.

CHAIRMAN VOLCKER. For the very reasons Roger suggested--and also because of the fact that we were high for about 5 months, not [just] the last 2 months--if I look at the quarterly averages, I'm not the least bit concerned about having a low quarter on a monthly average basis. I don't think we want declines in the money supply as we look ahead. We know we don't have all that close control over these things, but it would concern me if the money supply began moving into the kind of fall that it did last year, and I think we ought to respond to that. Short of that, I don't think we have much to worry about in the short run. On the federal funds rate range, a majority of the Committee wants a top limit of 20 percent or below, and that's true of almost all the participants not on the Committee. I would propose that we not put the federal funds rate range above 20 percent. [Views on] the bottom are scattered around 14 and 15 percent. I'm not sure that's too terribly vital at this point. The range is 15 to 20 percent now. I suppose absolutely the most neutral thing to do is to leave it where it is. We are right in the middle of that range now.

I share the view that some place between "B" and "C" is right. I share the instinct that Governor Gramley just expressed in that I wouldn't want to make a great effort to get down as low as "C" or below "B," if that took a lot of effort. But I would not be very disturbed if it goes there without any effort. This all bears upon where we put the borrowing number. We have to put some numbers down here. I wonder whether they shouldn't be expressed as a quarterly average. What have we been doing recently? Have we been expressing them as quarterly averages or--?

MR. PARTEE. They are December-to-March, for example, but not quarterly averages.

CHAIRMAN VOLCKER. The reason that occurred to me is that some of these numbers sound rather high to put down as a target when we just adopted a long-range target [with an upper limit of] 5-1/2 percent. If we suddenly put down a number that says we are starting off fresh out of the box with 6-1/2 percent, even though we can rationalize it, I don't know how many readers are going to be rationalizing it.

MR. MAYO. Well, that's one reason for using 5-1/2 percent.

CHAIRMAN VOLCKER. What is the target we just adopted: 3 to 5-1/2 percent?

MR. WALLICH. 3 to 5-1/2 percent.

CHAIRMAN VOLCKER. For M-1B?

MR. WALLICH. No, that's 3-1/2 to 6 percent.

CHAIRMAN VOLCKER. It's 3-1/2 to 6 percent for M-1B and 3 to 5-1/2 percent for M-1A.

MR. MAYO. Why don't we use 5-1/2 or 6 percent? It's the cowardly way out perhaps, but it isn't too far from the best analysis of our staff.

MR. WALLICH. That would suit me.

MR. ROOS. What are we talking about right now? I'm lost.

CHAIRMAN VOLCKER. Well, it's a round number. It's going to be either 5-1/2 or 6 percent, I guess, or we can say roughly 5 to 6 percent if we want to indicate a little less precision. One thing for sure: We won't be between 5 and 6 if we say 5 to 6 percent for a 2-month period.

MR. MORRIS. Nobody will ever know what the number is, Paul.

CHAIRMAN VOLCKER. Nobody will ever know what the number is anyway.

MR. MAYO. Is this December-to-March now?

CHAIRMAN VOLCKER. I'm looking at the December-to-March numbers, yes.

VICE CHAIRMAN SOLOMON. But in drawing up the reserve numbers, the staff needs a little [narrower] guideline I would think.

CHAIRMAN VOLCKER. Well, I suppose if we say 5 to 6 percent, they will assume 5-1/2 percent.

MR. GUFFEY. Is that for M-1B?

MR. PARTEE. 5 to 6 percent for what?

CHAIRMAN VOLCKER. Well, both of these numbers are the same. So what I'm talking about are both the M1 numbers.

MR. PARTEE. Both of them?

CHAIRMAN VOLCKER. They're both the same now.

MR. PARTEE. Oh, I see.

VICE CHAIRMAN SOLOMON. They're not the same in "C."

MS. TEETERS. ["A" and] "B" [don't have] a half percentage point [difference] in the numbers.

CHAIRMAN VOLCKER. Why is that?

MR. AXILROD. Oh, don't ask.

MR. MAYO. We've worn Steve out!

MR. AXILROD. That's explained in some footnote, which I think is accurate. It has to do with where the month of December ended up relative to the quarterly average. We constructed the path going from the quarterly average to March, but December's numbers for M-1A and M-1B were divergent relative to where they were on the quarterly average.

MR. SCHULTZ. You were right about don't ask!

CHAIRMAN VOLCKER. What's your explanation of why in "C" M-1B is different from M-1A?

MR. AXILROD. There we just started out in December and went ahead with the normal divergence between M-1A and M-1B.

CHAIRMAN VOLCKER. But why isn't it the same for the others?

MR. AXILROD. Because we--

SPEAKER(?). Don't ask.

MR. AXILROD. I would gladly explain it to you after the meeting.

CHAIRMAN VOLCKER. I think we are at a level of detail that isn't going to be significant.

MS. TEETERS. Steve, am I correct that if we go for anything less than "B," then total reserves will decline over the quarter?

MR. AXILROD. I think that's what we have, but that's somewhat an artifact of how the averages for the weeks with lagged reserve accounting worked out. Over the next 2 months it's lower.

MS. TEETERS. And if we went closer to "C," we'd have a rather sharp decline in total reserves?

MR. AXILROD. There would be a decline. I don't have the exact number at hand.

MR. MORRIS. That's a decline related to the hypothetical numbers, though. The actual reserve numbers would be growing, reflecting a shift out of savings accounts into NOWs. If we get a large part of [the estimated shift from savings accounts], that's a lot of reserves: from nothing to 12 percent.

MS. TEETERS. Yes, but this is a total reserves base.

CHAIRMAN VOLCKER. Well, I don't know on what basis it is. That's what Frank is questioning. Is that a hypothetical reserve figure?

MR. AXILROD. No, that's a real reserve figure. Reserves decline 3 percent allegedly under alternative C, assuming all the shifts are as we estimated. I don't think what happens to reserves, of course, is as important as what happens to the money. That takes account of lagged reserve accounting, which can make for a certain artificiality.

MR. SCHULTZ. It does affect the borrowings, though. How are you going to decide on what the borrowings are?

MR. AXILROD. We suggest for alternative B something like \$1.5 billion, which turns out to be very close to where borrowing is running this week.

CHAIRMAN VOLCKER. You think it has to be that high?

MR. AXILROD. Borrowing in the week of January 28 was \$1.8 billion. In the week of January 21, it was \$1.4 billion; and in the week of the 14th, it was \$1.3 billion. It has been rising recently and the funds rate has been dropping. The funds rate dropped off this week.

MR. STERNLIGHT. It's about \$1,350 million so far this week.

MR. AXILROD. And the funds rate is about 17-1/2 percent. So, we'd say \$1.5 billion or perhaps a little less. We're somewhat uncertain.

CHAIRMAN VOLCKER. If anything, we have had a slightly declining trend in the money supply since the first week of January. Why would we be increasing the borrowing?

MR. SCHULTZ. Nonborrowed reserves are coming down fairly rapidly.

MR. AXILROD. Well, it looked as if there was a sharp drop in the demand for borrowing in December. So, borrowing was low and the funds rate was a lot higher than it is now--19 to 20 percent. That's what we generally thought was an oddity. More recently it appeared that what one might have thought of as "normal" relationships were being reestablished. But they're being reestablished with borrowing going up and the funds rate dropping. This really reflects the fact that we don't think what we had in early January reflects, in essence, banks' demand for borrowing at the funds rate we've projected here, which in fact under alternative B--assuming the economy doesn't collapse under foot--is a somewhat higher funds rate than we now have. If the Committee believes that the funds rate should be lower either way, then I would certainly suggest to the Committee that it take a lower borrowing level.

CHAIRMAN VOLCKER. Well, I don't know where the funds rate should be. But just looking at the last few weeks, the tendency is for the money supply to decline with our current level of borrowing, and I would think the natural thing to have, until you have shown us differently, is a somewhat lower level of borrowing.

MS. TEETERS. That would say we reduced borrowing and total reserves.

CHAIRMAN VOLCKER. Well, I don't know what the total reserves have to do with the money supply.

MS. TEETERS. You don't think it's [unintelligible]?

CHAIRMAN VOLCKER. It's increasing nonborrowed reserves.

MR. PARTEE. What's the borrowing figure with "A"?

MR. AXILROD. In "A" we had it closer to what it had been recently, more like \$1-1/4 billion.

MR. PARTEE. It's \$1-1/4 billion for "A" and \$1-1/2 billion for "B."

MR. AXILROD. Given recent experience, if borrowing in the last two weeks is anywhere near what bank demands for borrowing are, that would suggest that \$1-1/4 billion would perhaps lead to a drop in the funds rate--one can't be all that certain--from around the current level. We had made that more consistent with "A," where we thought the odds on a drop in interest rates were greater but not with "B," where we thought the odds were less that interest rates would drop.

MR. ROOS. Mr. Chairman, I sensed yesterday in our discussion that the one improvement in our operating procedures that we were willing to sign off on, as of that time, was to move our nonborrowed reserve path more frequently to follow any changes in the borrowing level. If we do that, it seems to me that it's less important that our borrowing assumption be totally accurate. If we do what I think we said yesterday we were going to do, this will be adjusted frequently. So, I'd like to suggest specifically--I hope I'm not moving too quickly into the directive but I think it's terribly important that we write this into our procedure because this is germane to what we are talking about--that we put a sentence in at the end of the paragraph of the draft directive shown on page 17 that would read something like this: "The Committee assumes that member bank borrowings will average _____" (fill in whatever we assume during whatever period we use) "and instructs the Manager to adjust the nonborrowed reserve path appropriately and promptly if borrowings deviate from this assumption." Putting that in the directive gives us what I think we agreed yesterday would be a procedural change in our operating techniques. It makes it an unmistakable reflection of what the Committee said yesterday it was seeking to do. And it puts flexibility into this borrowing assumption exercise and really makes the initial borrowing assumption less important because we can adjust on a day-to-day or every-other-day basis if our borrowing assumption proves to be a mistaken one.

MR. WALLICH. Would you bring it back to where we had it originally by changing the path or would you drive it up or down by changing the path?

MR. ROOS. We would assume that it's impossible to anticipate what borrowings would be. Borrowings will occur due to forces not directly under our control. We would merely adjust the nonborrowed reserve path to what happens from moment-to-moment or day-to-day in the totals of member bank borrowing so that we don't try to anticipate or estimate what number to plug in.

CHAIRMAN VOLCKER. I don't think it works that way, Larry. Your basic idea, I think, may be useful. I'm not sure we could write the language here. The borrowings aren't totally predictable, but for the most part we make them what they are. The real question that arises is what we do with the nonborrowed reserve path when the money supply deviates and therefore generates--if we don't change the path--a difference in borrowing. But it's not exactly unanticipated; it's anticipated. What we want to end up doing in those conditions is that if the money supply is high, we'd reduce the nonborrowed reserves and increase the borrowings still further, not the reverse.

MR. WALLICH. If we vary the path merely enough to drive the banks back to the same level of borrowing, we are coming close to pegging the funds rate, which surely isn't what you have in mind.

MR. PARTEE. We adjust the total reserves. That is, if borrowing goes high, we cut nonborrowed in order to keep the total--

CHAIRMAN VOLCKER. But that's not what that language says. We'd have to--

MR. PARTEE. That's what he means.

MR. ROOS. Well, that's what I mean to try to achieve--a total reserves result consistent with what we want to do and, of course, it implies a--

CHAIRMAN VOLCKER. I think the language would have to read that if total reserves went off after all our multiplier adjustments and all the rest, we would increase the borrowings, not bring them back to the initial level.

MR. ROOS. Yes, that might be a better way of stating it. But the principle, I feel, is important.

VICE CHAIRMAN SOLOMON. I think it's a mistake to lock ourselves in too precisely in terms of the directive. For example, we have never spelled out in the directive the initial borrowing assumption, even though I know Peter Sternlight would like it. There are problems if we try to lock this in. We can and have instructed the Desk that it's the sense of the Committee that we want a prompter adjustment in the nonborrowed reserve path if we begin to see misses; but I don't know of any parameter we can give for a specific concrete instruction on that. It's still going to be judgmental.

CHAIRMAN VOLCKER. Maybe we can work on this for the next meeting. I don't think the language that Larry has is technically accurate, but maybe we can get some sense of this for next time. I suspect we will be here all afternoon if we try to do it today.

MR. WALLICH. If we simply said "shall vary the path in such a manner that total reserves are kept on track"--

CHAIRMAN VOLCKER. That's a little strong.

MR. WALLICH. It's perhaps a little strong, but the point is that borrowed reserves would be varied from their original--

CHAIRMAN VOLCKER. What it says now is: "In the short run, the Committee seeks behavior of reserve aggregates consistent with growth..." We could say: "In the short run, the Committee seeks behavior of reserve aggregates...and shall so adjust the provision of nonborrowed reserves consistent with growth..."

MR. ROOS. I think there is a certain urgency to it because I honestly believe there's a great deal of anticipation and interest in what the FOMC will choose to do with the study that was conducted. We sort of put in abeyance many of the proposals or the options that Steve's study highlighted. But one that we didn't was this. If we don't come up with something, I think we can be accused rightfully of, [despite] the study, still conducting our business in the same way that caused us to miss our targets last year. Again, the big trick is not just choosing targets but accomplishing them in the year 1981.

CHAIRMAN VOLCKER. Well, we will say something about that in the testimony, which will be out before the directive is out.

MR. GRAMLEY. It seems to me that in the world of uncertainty in which we are living--with this very, very rapid transition from demand deposits and other accounts to NOWs--the worst thing in the world we can do is to tell the Manager and other staff to speed up this adjustment process to uncertain numbers. Let's wait until the end of the month and take a look at it.

CHAIRMAN VOLCKER. I would suggest we defer this in terms of the directive. It may be a reasonable suggestion, but we will have to mention something about this in the testimony.

MR. SCHULTZ. We'll just blame it on the guy who ran the credit controls!

MR. GUFFEY. I don't mean to resurrect yesterday's discussion but it seemed to me that we did assume yesterday that there would be more rapid adjustments in the nonborrowed path. I'd like to go on record as saying that I don't happen to agree with that; I think that's what Lyle was talking about.

CHAIRMAN VOLCKER. There certainly was some difference of opinion expressed yesterday, but I think the weight, at least in terms of a majority opinion, was that we would be looking at that with a great deal of sensitivity.

MR. GUFFEY. A majority opinion, yes. I just want to register [my disagreement with that].

CHAIRMAN VOLCKER. It wasn't any powerful unanimous accolade, as I understood it.

MS. TEETERS. Steve, if you locked in on the volume of borrowing, wouldn't your multiplier go all over the map?

MR. AXILROD. If we held the level of borrowing, all the studies suggest we would get further off path than if we varied it.

CHAIRMAN VOLCKER. What we are talking about now is in which direction the risk is with regard to where the money supply will go. And nobody knows very well. My sense of it is, compared to your \$1.5 billion, that [borrowing] has been declining a little. It's possible the economy is declining. Without being very fancy about it, I guess I would take the risk more on reducing the volume of borrowing from the figure you suggested than raising it from the current level, which is what is involved in your suggestion. [I say that] just as a starting point. If we get a week or two of high money supply figures, then obviously, consistent with everything we have been saying, we would change it in one direction or another.

MR. ROOS. Paul, how would you respond to the question: What is going to be done differently this year than last year? You said that, hopefully, your testimony will touch on that. The public, or at least interested people, do know that we've had this study. And the study was an excellent one. How do you respond?

CHAIRMAN VOLCKER. Well, I think the primary point, and what I will try to list in the testimony, is what came out of the study. But in this sense, it seems to me the most important thing that came out of the study is that the present technique wasn't that bad.

MR. ROOS. Well--and I say this with the greatest respect for all of you--if any of us tries to say that last year's performance was satisfactory, I would just have to disagree totally. I think an awful lot of people would disagree.

MR. SCHULTZ. Larry, I think the answer to your question is that we're not going to have credit controls in 1981.

CHAIRMAN VOLCKER. Well, there are other things, too. I get this [criticism] all the time, of course, most specifically from the current Chairman of the Banking and Currency Committee. I'm just using him as an example because of his institutional position. He is in a mood where he says: "I don't give a damn where those money supply figures go, but you have too much volatility in interest rates." Now, that is one source of criticism. Everybody can unite on criticizing us on volatility. One group comes at it from the standpoint of instability in the money supply and another group comes at it from instability in interest rates. One of the things that came out of the study--I don't know whether the study was all this strong on this point but I'd love to make it this strong--was that you can't have it both ways, boys. You can criticize us for one or the other, but not both. Now, we know what the particularly monetarist oriented people are talking about. Mr. Garn has put it quite clearly, saying: "I'm sick and tired of all that monetarist business. I don't like these fluctuations in interest rates." That's a--

MR. FORD. I think the volatility issue will be less of a problem for us if we don't have credit controls again. The last time [the funds rate] went from 16 to 6 percent from top to bottom and then from 6 to 21 percent. So, from peak to trough to peak, we had a 25--

VICE CHAIRMAN SOLOMON. Also, we're going to have a nice stagnantly stable economy!

SPEAKER(?). Yes.

MR. PARTEE. There's also a 10 percent--

CHAIRMAN VOLCKER. I have a lot of sympathy for what you're saying, Larry, because I've got to answer the questions. But I don't want to get out of one box and we say we're doing things differently for the sake of doing things differently and then find out that we're in another box.

MR. ROOS. But I would hate, when I'm on my wedding bed and we're awfully close to making changes that we've been seeking for years and years, just to be lulled into sleep. That's a bad--

MR. MAYO. Larry, I'm really going to miss the Open Market Committee meetings!

CHAIRMAN VOLCKER. I could think of quite a few responses to that, Larry, from which I will refrain!

MR. GRAMLEY. I think you'd be better send him up to testify!

MR. SCHULTZ. You've put a totally new light on our procedures!

CHAIRMAN VOLCKER. May I return to our operational decision? Steve put forward the hypothesis of \$1-1/2 billion of borrowing to start with. I tell you, that makes me a little nervous as I see the probabilities. But it's anybody's guess in practice, I suppose.

MR. MORRIS(?). Make it \$1-1/4 billion.

MR. PARTEE. Was it \$1.3 billion last week, did you say?

MR. AXILROD. Last week it was higher; it was \$1.7 to \$1.8 billion.

MR. STERNLIGHT. But this week so far it's \$1.35 billion.

MR. PARTEE. Oh, it was moving up again. That's right. It was low and--

SPEAKER(?). It was higher.

MR. GUFFEY. Have excess reserves come down this past week?

MR. AXILROD. They've generally been running relatively high. I don't know how they're going to come out this week.

MR. GUFFEY. Well, does that account for the drop of the--

CHAIRMAN VOLCKER. This is a particularly confusing period. But what I'm looking at is the recent trend in the money supply--and if anything it may go too low--and the economic outlook. Steve is looking at the willingness of the banks to borrow recently. He says the money markets are relatively easy, given the amount of borrowing, so that leads him to believe that the borrowing figure ought to stay up. So, there are your choices.

VICE CHAIRMAN SOLOMON. The economy may be getting a little stronger.

CHAIRMAN VOLCKER. If that's what you think--that the economy may be a little strong and it continued--that would give weight to what Steve is saying. If the risk is the money supply being too high, you shade borrowing up and you end up where he is.

MR. WALLICH. Well, the banks still haven't exhausted much of their borrowing capacity for this quarter. In other words, we probably can expect them to be borrowing more in January and February than in March, given the administrative procedures.

MR. GRAMLEY. Well, I certainly would go along with a level of borrowing that's lower.

MS. TEETERS. That's not inconsistent with the targets we have for the money supply?

CHAIRMAN VOLCKER. Who knows?

MR. SCHULTZ. I don't know.

MR. PARTEE. I think it is.

SPEAKER(?). I think so.

MR. GRAMLEY. It's pretty hard to guess. We're talking about \$250 million from borrowing. None of us knows the accuracy of our forecast of borrowing so we don't know who is going to be right.

CHAIRMAN VOLCKER. Anybody for \$1.3 billion?

MR. GRAMLEY. That's a good compromise.

CHAIRMAN VOLCKER. Let me assume something generally in that neighborhood. It depends upon how we want to word it. Is there any appeal to saying 5 to 6 percent as a hypothetical figure for M-1A and M-1B? I suppose we'd say 8 percent or so for M2.

MR. GRAMLEY. I think it would make good sense to--

CHAIRMAN VOLCKER. I'm talking now about the directive language. We fill in those blanks by saying 5 to 6 percent for the M1s and about 8 percent for M2 and leave the federal funds range where it is at 15 to 20 percent, with the understood borrowing assumption. We did have language in the last directive implying that we were less concerned about a shortfall than an overshoot. Do you want to retain some language of that sort or not?

SEVERAL. No.

MR. PARTEE. I don't think so--not after December.

VICE CHAIRMAN SOLOMON. We may want to help correct any misimpressions of the kind you mentioned earlier by saying "recognizing the shortfall in December."

CHAIRMAN VOLCKER. It might be useful to get some pretty clear language--I don't know whether in the directive or not--about what this implies for the quarterly average. We'd say it implies a low quarterly average to avoid misconceptions.

MS. TEETERS. What period exactly are you talking about: December-to-March or the quarterly average or from February?

CHAIRMAN VOLCKER. In the 5 to 6 percent figure, we're talking December-to-March. I guess it doesn't make any difference. Well, the average makes a difference. It doesn't make any difference, if I understand this, [if we use] from January-to-March.

MS. TEETERS. The 5 to 6 percent for M-1B is a lot closer to "C" than it is to "B."

CHAIRMAN VOLCKER. If it'll make you happy, I'll look at the January-to-March on this now.

MR. MAYO. It doesn't make a difference anyway.

CHAIRMAN VOLCKER. What I was talking about was the December-to-March figure. For some reason it seems to make very little difference which one we're looking at.

VICE CHAIRMAN SOLOMON. Then you would put the quarterly figures in the directive?

CHAIRMAN VOLCKER. I would suggest putting some quarterly figure in the directive just so people can see it in perspective.

MR. ALTMANN. Directive or policy record?

CHAIRMAN VOLCKER. I think the directive, in case anybody just reads the directive. So, that's the proposition: 5 to 6 percent for the M1s, about 8 percent for M2, 15 to 20 percent on the federal funds rate, and an understood initial borrowing level somewhere around \$1.3 billion. These borrowings always mean adjustment borrowing as interpreted by Mr. Axilrod. Those are all the specifications we need. And there is no bias in the statement. Is that clear?

MR. BALLE. The only thing that isn't quite clear to me at least is what the Manager will understand he's to do, if, as, and when the borrowing assumption goes considerably off from the \$1.3 billion.

CHAIRMAN VOLCKER. I don't think it's if the borrowing assumption goes off; it's if the money supply trend goes off. If it goes low, he reduces it; if it goes high, he increases it.

SPEAKER(?). The path?

MR. WALLICH. The borrowing.

CHAIRMAN VOLCKER. The borrowing, yes.

MR. GUFFEY. What is the federal funds rate assumption consistent with \$1.3 billion of borrowing?

CHAIRMAN VOLCKER. Apparently Mr. Axilrod thinks it's going to decline. That's a--

MR. AXILROD. That's the range of uncertainty. If you believe the borrowing level of early December and early January, you might think there will be an increase. If you believe the borrowing level of very recent weeks, you might think there will be a decline.

MR. STERNLIGHT. Well, our guessing hasn't been very good on this, but if I made a guess--

CHAIRMAN VOLCKER. Yes, the guessing hasn't been very good.

MR. STERNLIGHT. --I'd think it would drift off somewhat with \$1.3 billion in borrowing.

CHAIRMAN VOLCKER. It's implicit in Steve's earlier comment that he thinks it's likely to drift off, but there's a considerable amount of uncertainty.

MR. PARTEE. You mean it would drift off so long as the aggregates aren't coming in strong.

MR. ROOS. In line with the spirit of quick adjustments on these, could we ask the Manager to incorporate in his report at our next meeting some record, as specific as possible, of what happened in terms of unanticipated fluctuations and how the Desk responded?

MR. PARTEE. Adjustments in the nonborrowed path? We already get them now.

MR. AXILROD. Yes, we generally put that in the Bluebook each time.

CHAIRMAN VOLCKER. Okay. Do people understand what we're voting on?

MR. ALTMANN.

Chairman Volcker	Yes
Vice Chairman Solomon	Yes
Governor Gramley	Yes
President Guffey	Yes
President Morris	Yes
Governor Partee	Yes
Governor Rice	Yes
President Roos	Yes
Governor Schultz	Yes
Governor Teeters	No
Governor Wallich	No
President Winn	Yes

MR. SCHULTZ. That's better.

SPEAKER(?). It was hard.

MR. SCHULTZ. It was asymmetric in that--

CHAIRMAN VOLCKER. Let me ask another question that occurred to me earlier. I don't think we have to make this a Committee decision. Mr. Axilrod keeps telling me that if we make the target wide enough one target we can always make--which makes people happy--is the reserve base because it's four-fifths currency and it's a fairly easy figure to predict. I'm talking about the annual targets. Do you think it would be useful to put in a statement someplace--not in terms of an operational target--that we believe this is all consistent with growth in the monetary base of such and such?

MR. MORRIS. Sure.

OTHERS. Yes.

MR. WALLICH. I feel there is a matter or principle involved here in that the base, in my mind, is not a defensible figure. It happens to fit. We can get a correlation with any large number that grows slowly the way currency does, but it isn't meaningful.

MR. GRAMLEY. Henry, I've compromised my principles on M-1A, M-1B, M2, and M3. You ought to be able to compromise yours on the base.

VICE CHAIRMAN SOLOMON. We fully agreed to what you proposed, Henry, shading from alternative "B" and "C."

MR. WALLICH. Well, [I dissented] because of the borrowing assumption--I wanted \$1.5 billion--and the interest rate. I would have been willing to settle for less than what I said, which was "C," but not quite so low.

CHAIRMAN VOLCKER. Okay, thank you.

END OF MEETING